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COMMERCIAL FERTILIZERS IN 1941-42

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DIVISION OF CHEMISTRY



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This is the annual Fertilizer Control Bulletin. It contains statistics regarding fertilizers sold in Texas, information regarding the fertilizer law, and analysis of samples of the fertilizer sold by different manufacturers.

The total sales of fertilizer in Texas for 1941-42 were 134,560 tons. In 1940-41 the sales were 129,758 tons. In 1939-40 they were 116,307 tons. Cottonseed meal sold as a feed but used as a fertilizer was not included in these totals. Sales of fertilizer were about 5% more than last year. Practically all the sales of mixed fertilizers were confined to about 20 analyses.

Tables are given showing the extent to which the various fertilizer manufacturers met or exceeded their guarantees. The cost of nitrogen, phosphoric acid, and potash were higher in 1941-42 than in 1940-41.

The subjects of vitamin B₁ and water culture are discussed and other information is given about fertilizers.

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COMMERCIAL FERTILIZERS IN 1941-42

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Fertilizer laws require fertilizer to be correctly labeled so that the purchaser can know what he is getting. The object of the fertilizer law is to protect the farmer or other users of fertilizer against misrepresentation of the composition of fertilizing value of the fertilizer as well as manufacturers and dealers against unfair competition due to such misrepresentation.

The first Texas fertilizer law was passed in 1899. It was revised and amended in 1911. The results of the fertilizer inspection has been published in bulletins of the Texas Agricultural Experiment Station regularly since 1906. This is the fortieth Fertilizer Control Buletin. It contains statistics, definitions of terms, a report on the analyses made in enforcing the provisions of the fertilizer law, and information regarding the use of fertilizers.

EXPLANATION OF TERMS

Nitrogen refers to the total nitrogen in the fertilizer. It is necessary in proper amounts for the development of all parts of the plant, but occasionally an excess of nitrogen delays maturity and is liable to promote growth of stalk and leaves at the expense of fruit. Nitrogen is needed by many Texas soils, especially the sandy soils in the eastern parts of the State. Since nitrogen is used in comparatively large quantities by plants and is, to some extent, washed from the soil, it is usually the first element to become depleted.

Available phosphoric acid is the phosphoric acid (P_2O_5) in fertilizers which can be taken up quickly by plants. Phosphoric acid promotes the fruiting of plants, though it is also necessary for the development of all parts of the plant.

Total phosphoric acid is the entire quantity of the phosphoric acid (P_2O_5) present, whether highly available or not. A guarantee of total phosphoric acid in place of available is made in bone, tankage, rock phosphate, and basic slag.

Potash guaranteed in a fertilizer is required by the law to be soluble in water. Potash, like nitrogen, is needed by all parts of the plant, but especially by stalk and leaves. An excess of potash may delay maturity and is liable to promote growth of the stalk and leaves at the expense of the fruit. When potash is abundantly supplied, plants may take up more than they need. Potash is present in soils more abundantly than nitrogen or phosphoric acid.

Valuation per ton represents the approximate average cost at retail of the plant food in the unmixed fertilizer. It is usually smaller than the price at which the mixed fertilizer is sold, but since it is an average, it may be greater than the prices of some of the unmixed fertilizer materials. The selling price includes cost of mixing, bags, transportation, the profit of the manufacturer, if any, and that of the dealer. The valuations are decided on about September 1, and the prices often change before the principal fertilizer season, which is February to April in Texas. The valuation sums up the value of the three plant foods shown in the analysis into a single figure, and is convenient for this purpose. The fertilizer law permits a deficiency of less than ten per cent in one plant food to be compensated by an excess of another, but if the valuation is four per cent less than the guaranteed valuation, a rebate must be paid to the purchaser. The valuation found compared with the valuation guaranteed shows whether or not the fertilizer value as a whole is better or poorer than the guarantee as a whole. The following prices were used for calculating valuations in 1941-42.

	Cents per pound
Nitrogen	12.0
Available phosphoric acid	6.5
Total phosphoric acid in Thomas phosphate, tankage, and bone meal	4.5
Total phosphoric acid in rock phosphate	1.5
Potash	6.5

Names of fertilizers. Fertilizers are frequently named by numbers, such as a 4-8-4 fertilizer, a 6-12-6 fertilizer and so on. In such names, the first figure stands for the percentage of nitrogen, the second for the percentage of available phosphoric acid, and the third for the percentage of water-soluble potash. This is a short and accurate method of naming fertilizers.

Information on the Fertilizer Bag and Tag

A fertilizer-tax tag is required to be placed on every bag of fertilizer before it is offered for sale or sold. The guaranteed analysis of the fertilizer is required by law to be printed on the bag or on the tag attached to the bag, so that the purchaser can see what he is buying. Total phosphoric acid may be guaranteed for bone or tankage instead of available phosphoric acid. A guarantee of total phosphoric acid is required in Thomas phosphate or rock phosphate. The information required on the package is as follows:

Net weight
 Name of fertilizer in full
 Name and address of manufacturer
 Guaranteed analysis:
 Nitrogen, per cent
 Available phosphoric acid, per cent
 Potash, per cent

How to Calculate the Valuation

The valuation of a fertilizer is calculated by multiplying the composition by the valuation of each unit of plant food and adding the products.

A unit is one per cent of a ton, or 20 pounds; so if the valuation of nitrogen is 12 cents a pound, the valuation of a unit is $12 \times 20 = \$2.40$. The valuation of a unit of available phosphoric acid at 6.5 cents a pound would be $6.5 \times 20 = \$1.30$; the valuation for a unit of potash at 6.5 cents a pound would be \$1.30. The following is an example of a calculation at the prices given above:

VALUATION OF 4-8-4 FERTILIZER

Nitrogen	4 x \$2.40 =	\$ 9.60
Available phosphoric acid	8 x \$1.30 =	\$10.40
Potash	4 x \$1.30 =	\$ 5.20
Total valuation per ton		\$25.20

FERTILIZER ANALYSES TO BE SOLD IN 1942-43

The grades of fertilizer sold in Texas have been limited in number for 17 years. This standardization aids the farmer to become familiar with the different kinds of fertilizer, enables him to decide more readily on the proper kind to be used, enables the agricultural worker to make definite recommendations, and reduces the cost of manufacture and handling, thereby also reducing the cost to the consumer.

At a meeting on July 8, 1942, of fertilizer manufacturers, State Chemists, agricultural officials, and representatives of the Office of Price Administration, the War Production Board, the U. S. Department of Agriculture, and the National Fertilizer Association, the following grades of mixed fertilizer were adopted for use in Texas for the season beginning Sept. 1, 1942: 0-14-7, 3-15-0, 3-12-6, 4-8-12, 4-12-4, 4-10-7, 10-10-0 and 10-20-0. At the usual meeting of the manufacturers, the eighteenth for Texas, and the ninth joint conference, the guarantee for nitrogen in sulphate of ammonia was raised from 20.5 to 20.6. Muriate of potash 60.0% was added to the list of materials, while 20% kainit was eliminated. The grades adopted for Texas are given in Table 1.

Table 1. Grades of fertilizer adopted for sale in Texas September 1, 1942 to August 31, 1943

0-14-7	4-10-7
3-15-0	4-12-4
3-12-6	10-10-0
4-8-12	10-20-0

MATERIALS

Activated sludge	Muriate of potash, 50% and 60%
Bat Guano	Nitrate of soda, 16%
Bone meal	Nitrate of soda and potash 15-0-14
Calcium nitrate	Sheep manure
Castor pomace	Sulphate of ammonia, 20.6%
Cottonseed meal	Sulphate of potash, 48%
Cyanamid, 21% and 22%	Superphosphate, 18%, 20%, 32% and 45%
Ground phosphate rock	Soft Phosphate with colloidal clay
Lawn and Garden	Tankage
Manure Salts, 22, 25, and 30%	

Since some nitrogen compounds formerly used in fertilizers are now required for use as explosives the quantity of nitrogen available for use in fertilizers will be less than it has been in the past. In order to save transportation, labor, and sacks, it is desirable to use as little filler as possible. In order to save labor involved in cleaning and changing machinery, it is desirable to manufacture as few grades of fertilizer as possible.

QUANTITY SOLD

The quantities of commercial fertilizer sold in Texas for several seasons, from September 1 to August 31, are given in Table 2. These are the actual sales as reported by the manufacturers, and not the tag sales. The tag sales are always a little larger than the actual sales. The sales in 1941-42 were about 5% higher than last season. The largest sales so far made in Texas were 187,215 tons during the season 1928-29. Fertilizer statistics for a number of years to August 31, 1926, including sales by counties, have been published in Bulletin 350, and from 1926 to 1938 in Bulletin 572.

Table 2. Fertilizers sold in Texas, (not including cottonseed meal sold as feed but used as fertilizers).

	Tons
1905-06	13,500
1910-11	52,985
1913-14	77,400
1914-15	17,500
1919-20	56,700
1920-21	14,850
1921-22	33,000
1922-23	73,300
1923-24	126,179
1924-25	97,719
1925-26	121,747
1926-27	79,863
1927-28	139,126
1928-29	187,215
1930-31	64,424
1932-33	30,845
1935-36	60,016
1936-37	84,936
1937-38	79,640
1938-39	93,115
1939-40	116,307
1940-41	129,578
1941-42	134,560

Quantity of Sales by Grades

Table 3 contains the sales of fertilizer by grades for four seasons arranged in order according to sales in the season 1941-42. Sales of 4-8-4 fertilizer are highest of all. The 4-12-4 comes second, the 4-8-6 third and the 6-10-7 fourth. These are in the same order as they were the last three years.

The tonnage of cottonseed meal reported in Table 3 includes only that tagged with fertilizer tax tags and sold as a fertilizer.

Table 3. Fertilizer sales by grades in order of tonnage for 1941-42.

	Tons 1941-42	Tons 1940-41	Tons 1939-40	Tons 1938-39
4-8-4	34,732	34,477	30,705	24,171
4-12-4	21,412	16,781	15,285	11,675
4-8-6	13,507	13,085	11,775	9,402
6-10-7	8,925	8,725	7,649	4,708
6-8-4	6,868	7,327	6,790	5,661
6-12-6	6,818	5,483	4,265	3,846
Superphosphate, 20%	6,771	5,681	4,040	3,537
4-10-0	5,891	4,697	4,011	3,827
Sulphate of ammonia	3,296	2,790	3,064	2,283
5-15-0	2,704	453	79	204
Bone Meal	2,583	2,044	1,563	1,604
Lawn and Garden Fertilizer	2,492	1,582	1,243	1,020
Nitrate of soda, 15% and 16%	2,458	1,742	1,641	1,098
5-15-5	1,676	1,014	872	794
3-10-0	1,618	2,030	1,676	1,834
6-8-8	1,585	2,527	1,767	882
6-9-3	1,466	2,164	1,767	1,373
Superphosphate, 18%	1,286	2,484	2,543	2,986
4-8-10	885	1,456	1,084	862
10-10-0	869	539	276	213
Phosphate rock (ground)	852	340	130	0
0-12-4	748	549	633	114
Superphosphate, 43%	715	0	0	0
Soft phosphate with colloidal clay	610	523	130	119
Superphosphate, 45%	544	647	419	265
Soil sulphur	527	106	109	0
Sulphur Earth	414	0	0	0
12-18-0	280	19	0	0
Tankage, bat guano and activated sludge	273	323	238	214
42-0-0	170	848	171	86
Muriate of Potash, 50%	136	224	166	165
Superphosphate, 32%	135	368	427	898
10-0-10	133	359	248	144
6-24-0	92	21	0	0
10-20-10	59	293	271	275
10-20-0	55	0	0	8
3-10-3	51	3,059	3,650	3,345
Sheep Manure	44	20	35	15
Sulphate of potash, 48%	30	48	15	29
16-20-0	28	1,044	1,462	1,838
8-8-8	20	112	0	0
12-15-0	20	0	0	0
Kainit, 20%	17	50	140	156
Manure salts, 30%	14	12	12	7
Cottonseed meal	10	15	5	179
Manganese sulphate	5	0	0	0
Manure salts, 25%	4	0	0	0
11-48-0	0	1,149	2,060	1,905
Nitrate of soda and potash 15-0-14	0	114	0	3
Calcium nitrate	0	0	828	320
Total	134,560*	129,578	116,307	93,115

*This does not include 164 tons of 48% superphosphate and 6296 tons of 20% superphosphate distributed by the Agricultural Adjustment Administration.

COMPOSITION AND SELLING PRICES OF DIFFERENT GRADES OF FERTILIZER

Table 4 contains the average composition, the guaranteed valuation, the valuation found by analysis, and the average retail selling price per ton, of various grades of fertilizers. The average retail selling price is the average of the cash retail prices furnished to the fertilizer inspector by the dealers. The prices of the same fertilizer may be different in dif-

ferent towns on account of differences in cost of transportation or for other causes. The retail price includes handling costs, carrying charges, and the dealer's profits, as well as the cost of the plant food used in the materials from which the fertilizer is made. Prices of fertilizer were frozen by the Office of Price Administration in the spring of 1942.

Table 4. Average composition, valuation and selling prices of grades of fertilizers 1941-42

Grades of farm fertilizers	Number averaged	Nitrogen per cent	Available Phos. acid per cent	Potash per cent	Guaranteed valuation per ton	Valuation found per ton	Selling price per ton
0-12-4	6		12.26	4.23	\$20.80	\$21.43	\$26.00
3-10-3	2	3.43	10.24	3.30	24.10	25.84	31.00
4-8-4	285	4.04	8.31	4.01	25.20	25.72	30.98
4-8-6	159	4.06	8.31	5.86	27.80	28.19	32.96
4-8-10	17	4.11	8.27	10.03	33.00	33.63	36.00
4-10-0	15	4.06	10.26		22.60	23.08	30.91
4-12-4	212	4.09	12.02	4.07	30.40	30.73	34.06
5-15-0	6	5.22	15.27		31.50	32.37	36.00
5-15-5	14	5.12	14.47	5.15	38.00	37.79	41.67
6-8-4	55	5.95	8.14	4.15	30.00	30.27	35.04
6-8-8	14	6.08	8.17	7.79	35.20	35.34	38.00
6-9-3	24	5.89	9.17	3.24	30.00	30.27	34.88
6-10-7	131	6.07	10.16	6.93	36.50	36.77	38.99
6-12-6	79	6.02	12.02	6.17	37.80	37.99	38.92
6-24-0	3	6.29	23.00		45.60	45.00	46.83
10-0-10	4	9.91		8.61	37.00	34.97	41.00
10-10-0	4	9.60	10.60		37.00	36.83	39.87
10-20-10	2	10.06	20.10	10.14	63.00	63.46	59.50
12-18-0	2	11.96	17.75		52.20	51.78	
20.8% Ammonium Sulphate	1	20.91			49.92	50.18	
Bone Meal	3	4.48	17.62*		24.30	26.61	40.00
Bone Meal, Raw	6	3.72	22.04*		28.68	28.75	37.80
20.6% Cyanamid, granular	1	20.63			49.44	49.51	55.00
Hu-Actinite 5.5-2.0-0 ..	2	4.45	2.87		15.80	14.41	22.50
Kainit 20%	1			20.10	26.00	26.13	31.00
Nitrate of Soda 16%	9	16.15			38.40	38.77	46.50
Pulverized Sheep Manure ..	1	1.96	1.32	2.99	8.70	10.31	
Soft Phosphate with Colloidal Clay 20% ..	1		20.73*		6.00	6.22	20.00
Sulphate of Ammonia 20.5%	17	20.65			49.20	49.57	50.20
Superphosphate 18%	10		19.31		23.40	25.10	26.00
Superphosphate 20%	47		20.49		26.00	26.81	27.25
Superphosphate 32%	3		31.63		41.60	41.12	38.00
Superphosphate Sulphur Mixture ¹	1		10.89				30.00
Uramon Fertilizer Compound	1	41.97			100.80	100.73	
Grades of flower, lawn and garden fertilizers							
3-4-11	1	3.03	4.47	11.32	26.70	27.80	120.00
3-7-16	1	3.28	11.41	19.70	37.10	48.31	5334.40
4-12-4	7	4.26	11.52	4.35	30.40	30.84	87.17
6-8-4	1	6.36	8.07	4.49	30.00	31.59	70.00
6-12-4	6	5.91	12.08	4.56	35.20	35.82	65.80
7-6-19	1	7.20	6.71	20.00	49.30	52.00	2665.60
7-9-25	1	8.68	9.65	27.49	61.00	69.12	4576.00
10-6-4	2	10.37	6.48	3.99	37.00	38.49	62.50
11-12-15	1	13.62	13.02	20.69	61.50	76.52	823.44
11-15-20	1	11.49	19.44	23.68	71.90	83.63	7500.80
23-27-17	1	21.95	23.02	16.48	112.40	104.03	2890.50
Bone Fertilizer	1	3.15	24.31		27.53	29.44	200.00

*Total Phosphoric Acid

¹Also contains 50.97% free sulphur

The average valuations found by analysis (Table 4) exceed the guaranteed valuation in almost every case. The exceptions are 5-15-5, 6-24-0, 10-0-10, 10-10-0, 12-18-0, 23-27-17, 20.6% cyanamid, and 32% superphosphate. In most of these, however, the average valuations found by analysis are only slightly below the valuations guaranteed.

The flower, lawn and garden fertilizers are listed separately from the farm fertilizers in Table 4. The selling prices of these fertilizers range from \$62.50 to \$7500.00 per ton. The fertilizers in tablets sell at high prices. It is obvious from the table that while fertilizer for flowers, lawn and garden can be secured at reasonable prices, some of it sells at very high prices.

Cost of Plant Food

Table 5 contains the calculated retail cost of a pound of nitrogen, of available phosphoric acid, and of potash, in cents per pound, as calculated from the cash selling prices per ton given in Table 3 and the guaranteed composition. For the purpose of these calculations it was assumed that the prices were in the same ratio as the valuations. As the price of the same fertilizer may be different in places, these figures are not correct for any particular locality, but represent averages only, and are for purposes of comparison. The prices were collected by the inspectors from retail merchants handling fertilizers. Grades used extensively near the factories might average a lower price than those used at a distance on account of lower transportation costs. The fertilizers with the lowest cost of plant food are given first in the table.

Fertilizers for lawns, gardens and flowers are listed separately in Table 5. The prices of nitrogen range from 20.27 cents per pound to \$17.25 per pound. The cost of the phosphoric acid and potash are in similar proportions. The tablet fertilizers sell at the highest prices.

Cost of Nitrogen. The 10-20-10 was the cheapest source of nitrogen, sulphate of ammonia 20.5% was next, 6-24-0 third, 6-12-6 fourth and 6-10-7 fifth. Bone meal was the most expensive source of nitrogen, but is chiefly used for lawns or gardens. Of the farm fertilizers, 4-10-0 was the most expensive source of nitrogen, followed by raw bone meal and 4-8-4 as shown in Table 5. The cost of nitrogen was greater in most of the mixed fertilizers than in sulphate of ammonia because it costs to mix the fertilizer. The lowest-priced nitrogen in the mixed fertilizers was in the 10-20-10, followed in order by the 6-24-0, 6-12-6, and 10-10-0. The 4-8-4, the most popular fertilizer, was also high in price. Nitrogen was higher in price than last season in all fertilizers. The difference averaged .35 of a cent a pound higher for nitrogen in 10-20-10, 1.08 cents higher for that in 4-8-6, 1.19 cents higher for that in 4-12-4, and 1.50 cents per pound higher this year in 4-8-4.

Table 5. Approximate average cost of plant food in cents per pound.
Arranged in order of increasing cost 1941-42.

Grades	Nitrogen	Available Phosphoric acid	Potash
Superphosphate 32%		5.94	
10-20-10	11.33	6.14	6.14
Sulphate of Ammonia 20.5%	12.24		
6-24-0	12.32	6.68	
6-12-6	12.36	6.70	6.70
Superphosphate 20%		6.81	
6-10-7	12.82	6.94	6.94
10-10-0	12.94	7.01	
6-8-8	12.95	7.01	7.01
4-8-10	13.08	7.09	7.09
5-15-5	13.16	7.13	7.13
10-0-10	13.30		7.20
Superphosphate 18%		7.22	
Cyanamid 20.6%	13.34		
4-12-4	13.44	7.28	7.28
5-15-0	13.72	7.43	
6-9-3	13.96	7.56	7.56
6-8-4	14.02	7.59	7.59
4-8-6	14.23	7.71	7.71
Kainit 20%			7.75
Nitrate of Soda	14.53		
4-8-4	14.75	7.99	7.99
0-12-4		8.13	8.13
3-10-3	15.43	8.36	8.36
Raw Bone Meal	15.82	5.93*	
4-10-0	16.42	8.89	
Activated Sludge	17.09	9.26	
Bone Meal	19.75	7.41*	
Soft Phosphate with Colloidal Clay		5.00*	
Flower, lawn and garden fertilizers			
10-6-4	20.27	10.98	10.98
6-12-4	22.43	12.15	12.15
6-8-4	28.00	15.17	15.17
4-12-4	34.40	18.64	18.64
3-4-11	53.93	29.21	29.21
11-12-15	63.11	34.18	34.18
Bone Fertilizer	87.18	39.69*	
23-27-17	308.59	167.15	167.15
7-6-19	648.83	351.45	351.45
7-9-25	900.19	487.60	487.60
11-15-20	1251.88	678.10	678.10
3-7-16	1725.41	934.60	934.60

*Total phosphoric acid

Cost of Phosphoric Acid. The cheapest source of phosphoric acid was 32% superphosphate, then 10-20-10, followed by 6-24-0 and 6-12-6. The cost of available phosphoric acid was about .41 cent less per pound in 20 per cent superphosphate than in 18 per cent. Omitting the house-hold fertilizers, phosphoric acid was most expensive in activated sludge, then in 4-10-0, 0-12-4 and 4-8-4. Available phosphoric acid in 4-8-4 was .81 of a cent a pound higher, and in 4-12-4 was .64 of a cent a pound higher than last year.

Cost of Potash. 10-20-10 furnished the cheapest potash, followed by 6-12-6 and 6-10-7. Omitting the garden fertilizers, potash was the most expensive in 0-12-4, followed by 4-8-4, kainit 20% and 4-8-6. Potash in 4-8-4 cost .81 of a cent a pound more, and in 4-12-4 .64 of a cent a pound more than last year.

FREE ANALYSIS

Purchasers of commercial fertilizers for their own use (but not for sale), can secure a free analysis of a sample provided they take a legal sample. Those who desire the free analysis of a sample of commercial fertilizer should write for a blank, "Application for Free Fertilizer Analysis," to the State Chemist, College Station, Texas, before taking a sample. The proper sampling of a fertilizer requires care, and the law requires it to be taken in a certain way so that a fair sample is taken. If the sample is not properly taken, it does not represent the fertilizer sampled, and the analysis may be better or poorer than the goods actually are. This privilege of a free analysis applies only to fertilizers tagged, and sold under the fertilizer law and to samples properly taken so that they represent the goods sampled.

ANALYSIS OF FERTILIZERS, 1941-42

Samples of fertilizer were collected from the goods being sold in many towns and cities. The chief places of sales were visited several times.

Table 8 near the end of this Bulletin, contains a list of 1185 of the samples of fertilizer subjected to analysis in the season ending September 1, 1942. Practically all samples of fertilizer were collected by our inspectors. Analyses and inspection were made by S. E. Asbury, T. L. Ogier, Waldo Walker, M. Weber, Paul Kohn, M. Joseph, and C. B. McLarry.

Relation of Valuation Guaranteed to Valuation Delivered

Table 6 contains the average guaranteed valuation, and the average valuation found by our analyses, for all manufacturers doing business in Texas. In the preparation of this table, all analyses made were averaged, even though several were made of each brand. Fertilizer materials are included as well as mixed fertilizers.

Averages Below Guarantee

Whenever any lot of fertilizer is 4 per cent or more below guarantee, the law requires all persons who have sold this lot of fertilizer to make good the deficiency to all purchasers. This rebate is paid by the manufacturer to the dealer and by the dealer to the customer. The number of lots on which rebates were paid by each manufacturer is shown in Table 6.

Table 6. Average valuation of all fertilizers guaranteed and found in dollars per ton. 1941-42

Manufacturer	Number Averaged	Valuation Guaranteed	Valuation Found	No. of samples more than 4% below guarantee
Agricultural Laboratories	1	\$61.50	\$76.52	0
American Cyanamid Company	1	49.44	49.51	0
Archer Grain Company	1	26.70	27.80	0
Arkansas Fertilizer Company	1	37.00	37.44	0
Armour Fertilizer Works	185	30.99	31.17	2
The Barrett Company	1	38.40	38.98	0
Bryan Cotton Oil & Fertilizer Company	10	30.62	32.86	0
Campbell Fertilizer Company	27	29.43	30.25	2
Chemi-Grow Ltd.	1	61.00	69.12	0
Chilean Nitrate Sales Corporation	7	38.40	38.79	0
Coastal Chemical Company, Inc.	3	41.40	39.49	1
Colloidal Minerals, Inc.	1	6.00	6.22	0
The Colorado Fuel and Iron Corporation	6	49.20	49.33	0
Consolidated Chemical Industries, Inc.	7	26.80	27.60	0
Crockett Fertilizer Works	12	28.93	29.57	0
David Hardie Seed Company	2	33.70	35.28	0
The Davison Chemical Corporation	2	34.10	35.19	0
E. I. du Pont de Nemours & Company	1	100.80	100.73	0
East Texas Cotton Oil Co. (Palestine)	31	29.06	29.29	2
East Texas Cotton Oil Co. (Tyler)	14	29.42	29.63	2
Farm Service, Inc.	1	25.20	25.10	0
Farmers Cotton Oil Company	6	33.38	34.13	0
Federal Chemical Company, Inc.	61	28.45	28.89	1
Fidelity Chemical Corporation	87	31.62	32.48	0
Ford Motor Company	1	49.92	50.18	0
Gilmer Cotton Oil & Fertilizer Company	11	29.34	29.92	0
City of Houston Engineering Department	2	15.80	14.41	2
Hydroponic Chemical Company, Inc.	1	49.30	52.00	0
International Minerals & Chemical Corp.	51	28.90	29.47	0
Jacksonville Fertilizer Company	4	30.40	31.79	0
Kelly-Weber & Company, Inc.	4	32.15	32.80	0
Longview Cotton Oil Company	12	28.81	28.65	0
Marshall Cotton Oil Company	13	29.32	29.05	1
Mixson Brothers	11	33.37	33.43	1
New Jersey Fertilizer Company	1	27.53	29.44	0
Nicholson's Seed Store	2	33.70	34.90	0
Oil Mill & Fertilizer Works	14	30.63	30.29	2
Pate Bros. Fertilizer Works	21	28.33	28.84	0
Pittsburg Cotton Oil Company	12	30.27	30.43	2
Plantabbs Company	1	71.90	83.63	0
Port Fertilizer Company	14	36.58	36.72	2
The Pulverized Manure Company	1	8.70	10.31	0
Ra-Pid-Gro Corporation	1	112.40	104.03	0
Shreveport Fertilizer Works	64	29.94	30.56	4
Southwestern Peanut Growers Association	16	28.64	28.74	0
Swift and Company Fertilizer Works	176	30.13	30.33	5
Temple Cotton Oil Company	2	26.50	26.49	0
Texas Farm Products Company	79	29.22	29.56	0
Tri-State Fertilizer and Lumber Company	9	30.99	31.86	0
Tyler Fertilizer Company	15	27.98	28.24	1
United Chemical Company	57	29.36	29.39	3
Virginia-Carolina Chemical Corporation	84	30.03	30.51	0
Waldo Fertilizer Works	13	31.75	32.65	1
Water Culture Foundation	1	37.10	48.31	0

Fillers

Many mixed fertilizers are made by mixing together ammonium sulphate, superphosphate, potash salts, and other materials containing nitrogen, phosphoric acid and potash. It is possible to make such fertilizers entirely from fertilizing materials, but it is often more desirable and less

expensive to make a mixture to the desired composition by the addition of sand, dolomite, or other material containing little or no fertilizing ingredients. Such additions are called fillers.

The materials used as filler in the grades of fertilizer offered for sale in Texas the past several seasons included sand, limestone, lime, dolomite, spent fullers earth, citrus pulp, gypsum, phosphate rock, cocoa meal, and coffee chaff.

Only small quantities of limestone or lime can be used because larger quantities will revert some of the available phosphoric acid to insoluble phosphoric acid, thereby decreasing the percentage of available phosphoric acid in the fertilizer and causing it to fall below guarantee.

The grades of fertilizer adopted for sale in the season of 1942-43 are so selected as to reduce the qualities of filler to as low a quality as possible.

NON-ACID FORMING FERTILIZERS

Ordinary fertilizers when used for a number of years on soils with a low buffer capacity may acidify a neutral soil, or make an acid soil more acid, and so are termed acid-forming fertilizers. Non-acid forming fertilizers are made by the addition of sufficient amounts of ground dolomite to neutralize the acidity, or by the selection of suitable fertilizing ingredients. Dolomite is a calcium magnesium carbonate. Limestone is not suitable because large quantities revert the available phosphoric acid of the fertilizer and cause it to become insoluble. In the eastern part of the United States, where fertilizers have been used for a long time and where the soils are already acid, ordinary fertilizer may not give as good yields of crops as non-acid forming fertilizers. Non-acid forming fertilizers are recommended for use on acid soils having a pH of 5.5 or lower and which are likely to become still more acid with ordinary fertilizers. Since Texas soils are generally only slightly acid, or even alkaline, the use of non-acid forming fertilizers is not at present necessary, except under exceptional conditions. Where the soils are neutral or slightly alkaline, as is the case in large areas of limestone soils, ordinary fertilizers are preferable to non-acid forming fertilizers. Some plants require slightly acid soils for best results. An acid-forming fertilizer may be better on an alkaline soil than a non-acid forming fertilizer. For further information see Progress Report No. 594.

Only two brands of fertilizer sold in Texas this season were claimed to be non-acid forming. Examinations were made of 24 samples, with the results given in Table 7. Acid-forming qualities of some ordinary fertilizers are given in Table 8 of Bulletin 607.

Table 7 Analyses of non acid-forming fertilizer.

Laboratory Number	Name of Brand	Acid-Base Balance	
Claim to be non acid-forming			
66811	Swift's pH 7 6-8-4	66B	passed
66817	Swift's pH 7 6-8-4	66B	passed
66820	Swift's pH 7 6-8-4	59B	passed
66825	Swift's pH 7 6-8-4	83B	passed
66833	Swift's pH 7 6-8-4	20A	passed
66838	Swift's pH 7 6-8-4	68B	passed
66851	Swift's pH 7 6-8-4	17B	passed
66907	Swift's K. O. non-acid forming 6-8-8	6A	passed
66916	Swift's pH 7 6-8-4	26A	passed
66920	Swift's K. O. non-acid forming 6-8-8	13A	passed
66926	Swift's pH 7 6-8-4	30A	passed
66955	Swift's pH 7 6-8-4	9A	passed
67052	Swift's K. O. non-acid forming 6-8-8	62A	Sl. acid forming
67066	Swift's pH 7 6-8-4	54A	Sl. acid forming
67091	Swift's pH 7 6-8-4	15A	passed
67117	Swift's pH 7 6-8-4	22A	passed
67118	Swift's K. O. non-acid forming 6-8-8	21B	passed
67175	Swift's K. O. non-acid forming 6-8-8	6B	passed
67303	Swift's pH 7 6-8-4	20A	passed
67310	Swift's pH 7 6-8-4	28A	passed
67319	Swift's K.O. non-acid forming 6-8-8	11A	passed
67327	Swift's pH 7 6-8-4	37A	passed
67364	Swift's pH 7 6-8-4	38A	passed
67376	Swift's K. O. non-acid forming 6-8-8	3A	passed

Relation to Experiment Station Work

The work of the State Chemist is closely related to the chemical work of the Experiment Station. In his capacity as Chief of the Division of Chemistry of the Experiment Station, the State Chemist is carrying out extensive investigations into the fundamental properties of soils, especially with respect to their content of plant food. This work is related closely to the use of fertilizers and is connected with investigations as to the agricultural value of fertilizers required of the Fertilizer Control, for fertilizers vary in effect upon the different soils.

Soft Phosphate With Colloidal Clay and Phosphate Rock

Soft phosphate with colloidal clay is a natural phosphate of lime containing 20 per cent of total phosphoric acid or more. The phosphate of lime is so finely divided that some of it is termed colloidal. The availability to plants of the phosphoric acid of soft phosphate with colloidal clay is on an average about 40 per cent of that of the available phosphoric acid in 20 per cent superphosphate. Additional information is given in Bulletin 509.

Phosphate rock contains phosphoric acid as tri-calcium fluorophosphate and contains about 3 per cent of fluorine. When sufficiently pure, phosphate rock is used for the manufacture of superphosphate. The phosphoric acid in phosphate rock is taken up very slowly by the plants. There are very decided differences in the power of plants to take up phosphoric

acid from phosphate rock and its effect is different on different soils. The availability of the total phosphoric acid in rock phosphate to plants averages about one-fourth of the availability of phosphoric acid in superphosphate. Additional information is given in Bulletin 212.

Sulphur, Gypsum, Manganese, and Other Secondary Fertilizing Elements

Our present evidence indicates that manganese, magnesium, sulphur, calcium, boron, iodine, zinc or other secondary fertilizing elements are not needed as additions to Texas soils. Sulphur and calcium are present in large quantities in practically all mixed fertilizers except nitrate of soda, which is low in both, ammonium sulphate, which is low in calcium, and cyanamid, which is low in sulphur. Small quantities of the other elements are also present. The quantities of sulphur and calcium in some Texas fertilizers are given in Bulletin 593.

We are unable to recommend the use of sulphur or gypsum alone as a fertilizer to supply sulphur in Texas because Texas soils need nitrogen, phosphoric acid or potash much more than they need sulphur, and the sulphur or gypsum does not supply any of these plant foods. The experiments which have been carried out do not give results which justify the use of such materials alone as fertilizers (see Bulletins 408 and 414). This also applies to the natural mixture of sulphur, gypsum, sulphuric acid and other substances, which various parties and concerns have attempted to sell or exploit as a fertilizer or soil amendment. It is not recommended for use as a fertilizer and does not give results on soils which need fertilizer, as shown in Bulletins 408 and 414.

For plants which do best on an acid soil, sulphur is being used to acidify soils that are alkaline or neutral. The organisms in the soil oxidize the sulphur to sulphuric acid and this in turn acidifies the soil. The oxidation requires two or three months. The quantity to be used depends upon the buffer capacity of the soil for acid, and may range from a few hundred pounds to several thousand pounds per acre. In the latter case, acidification of spots is best. The value of a sulphur mixture for acidifying the soil depends on the quantity of sulphur present: a material containing 85 per cent of sulphur is $4\frac{1}{2}$ times as strong as one containing only 20 per cent of sulphur and one containing 99 per cent sulphur is 14 per cent stronger than one which contains 85 per cent.

On some limestone soils plants suffer from a yellowing of the leaves, known as chlorosis, usually due to deficiency of iron. The presence of carbonate of lime prevents the plant from taking up (or utilizing) sufficient iron. Most of these soils contain such large quantities of carbonate of lime that broadcast applications of sulphur are soon neutralized and made useless. A sufficient number of acidified spots may prevent the chlorosis. The acidified spots may be made by digging post holes to depths of 2 to 3 feet, mixing the dirt with sulphur and returning the mixture

to the holes. Holes may also be made with a pointed iron rod and filled with the sulphur. The sulphur may also be placed in furrows. A sulphur compost may also be used, as recommended by Godfrey in Progress Report No. 675.

Investigations on the use of manganese sulphate for Texas soils are given in Bulletin 432. The results of the experimental work do not justify recommendation of the use of manganese sulphate on Texas soils.

Sodium Fluorescein as a Fertilizer

Tablets of sodium fluorescein, under the trade name of "Hy-Gro" recently appeared for sale as a "liquid sunshine for all plants." Printing on the package claimed that "Hy-Gro accelerates plant growth by concentrating the sun's energy and promoting photosynthesis. Hy-Gro treated plants produce more abundantly and are healthier because they absorb more vital minerals than untreated plants." These claims brought the product under the fertilizer laws of Texas. Experiments were therefore run in the greenhouse in order to determine whether or not corn, periwinkles, and petunias responded to the addition of this material.

Corn, petunias, and periwinkles were grown in the usual greenhouse procedure, after fertilizing all pots with 6-12-6 commercial fertilizer. Six pots in each series received Hy-Gro applied in accordance with directions printed on the package, while six pots were untreated. Corn averaged 33.7 grams of dry matter per pot from treated pots and 33.4 grams from untreated pots. Periwinkles averaged 33 blooms and 12.1 grams of dry matter per pot from both treated and untreated pots. Petunias averaged 54 blooms and 7.7 grams of dry matter per pot from the treated pots and 53 blooms and 7.4 grams of dry matter per untreated pot. None of these differences are significant; results secured do not substantiate claims printed on the package. There are no chemicals known to science which would accelerate plant growth by concentrating the sun's energy and promoting photosynthesis (Reported by Dr. J. F. Fudge).

Root Stimulants as Related to Crop Production

Claims have been made that greater yields of cotton, corn and other crops can be secured by dusting the seed with a plant root stimulant such as levulinic acid or other such compounds.

While these compounds under some conditions may stimulate the growth of roots, and help to secure a better stand, under other conditions they have no effect or may even be injurious. Their use to increase the production of cotton or other crops cannot be recommended at the present time. Future investigations may possibly show that some of these chemicals under some conditions may be safely used with profitable results. Whether or not any of them can be profitably used, and which of these

chemicals can be used and under what conditions their use may be profitable must await the results of further investigation. They have been used to promote the growth of roots on cuttings. The kind of chemical used, the strength of the solution and the kind of cutting all affect the results. The subject is discussed in a book entitled *Plant Growth Substances, their chemistry and application with special reference to sythetics*, by Hugh Nichols, published by the Chemical Publishing Company in 1941.

Vitamin B₁

Vitamin B₁ (thiamin hydrochloride) is now an ingredient of some garden fertilizers and is sold alone in such a way as to bring it under the Texas fertilizer law.

Vitamin B₁ appears to promote the growth of roots and may be of advantage to some plants at the time they are transplanted. Vitamin B₁ does not and cannot take the place of mineral fertilizers essential to plant growth. If the soil does not contain sufficient plant food, fertilizers are needed whether vitamin B₁ is supplied or not.

All plants produce vitamin B₁ in their leaves and in their roots. Many plants, especially wheat, corn, tomatoes, peas, beans, etc., produce sufficient vitamin B₁ to supply all needs.

The application of vitamin B₁ in the growing of plants probably has a definite field of usefulness, but its use is still in the experimental stage. Those who wish to experiment with it should compare five or more plants to which it has been applied with five or more similar plants to which it has been applied growing under the same conditions. Unless some such comparison is made, it is not possible to tell whether or not the vitamin B₁ is effective. Recent experiments have shown that applications of vitamin B₁ have little effect on the growth or flowering of most plants. Further information is given in Circular 95.

Fertilizers for Water Culture

Soluble fertilizers, intended for use in water culture, are now being sold. Water culture is the growing of plants in a water solution that contains all the necessary elements for proper plant growth. There is nothing either new or miraculous about growing plants in water, as it has been done for a hundred years. What is new is the commercial application of water-culture methods.

The soil supplies plants with necessary elements, can be easily fertilized, and the soil helps to regulate the supply of plant food to the plant. The elements which must be added to the water in which the plants are to be grown include nitrogen, potassium, calcium, magnesium, sulphur, iron, managese, boron, zinc and copper. The solution must have the proper acidity, which requires adjustment or renewal from time to time. The plants must be properly supported. Once the plants begin to grow, the questions of suitable quantities of light, correct temperature, heat, as

well as protecting from pests and diseases must be met. Keeping the solution well balanced in necessary elements is important and not always easy. All plants do not use the same quantities of the elements, consequently as one is absorbed so freely by certain plants a deficiency of it in the solution may result.

Commercial growing plants in water culture is in the experimental stage. For some crops the method is entirely too expensive, for other crops, the yield will be just as large when grown in soil. For anyone who wishes to experiment with water culture, there are several books describing the technique in detail, these can be purchased from a good bookstore.

INFORMATION CONCERNING THE USE OF FERTILIZER

Information concerning the use of commercial fertilizer for various crops in different sections of Texas will be sent free on request. Some publications of the Texas Experiment Station giving information on fertilizers and fertilizing material are as follows:

- Circular 85—Use of commercial fertilizers.
- Bulletin 167—Commercial fertilizers and their use.
- Bulletin 212—The availability of phosphoric acid in rock phosphate.
- Bulletin 350—Fertilizer statistics for Texas (to 1927).
- Bulletin 398—Fertilizers for rice in Texas.
- Bulletin 414—Possibilities of sulphur as a soil amendment.
- Bulletin 428—The fertilizing value of greensand.
- Bulletin 432—Manganese in Texas soils and its relation to crops.
- Bulletin 445—The composition and fertilizing value of sewage sludge.
- Bulletin 469—Fertilizer experiments with cotton.
- Bulletin 509—Availability of the phosphoric acid of finely divided rock phosphate.
- Bulletin 524—Fertilizer experiments with yellow Bermuda onions in the Winter Garden region of Texas.
- Bulletin 572—Fertilizer statistics for Texas, 1926-38.
- Progress report 594—Non-acid forming fertilizers.
- Bulletin 596—Onion fertilizer experiments at Laredo, Big Well, and Eagle Pass, Texas.
- Bulletin 602—Fertilizers for rice in Texas.
- Progress report 675—Acid production in compost of sulphur and organic matter.
- Circular 90—Rose growing for the home gardener.
- Circular 95—Vitamin B₁ (Thiamin) and other vitamins as fertilizers.

Any of these publications will be sent free on request to the Director of the Experiment Station, College Station, Texas. In order to avoid errors, both the name and the number should be given.

SUMMARY

This Bulletin contains a report of the Texas Fertilizer Control for 1941-42.

An explanation of terms is given.

Sales of fertilizer in Texas were 134,560 tons in 1941-42. They were 129,578 tons in 1940-41. The tonnage for other years is given. The tons reported do not include cottonseed meal sold as a feed but used as a fertilizer.

The average selling prices and composition of the different kinds of fertilizer are given.

Available phosphoric acid costs less in 20 per cent superphosphate than in 18 per cent.

The grades of fertilizer to be sold next season are given.

A table is given showing the relation of the guaranteed valuation to the valuation delivered by the various manufacturers.

Analyses of 1,185 samples collected by the inspector are given.

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	Archer Grain Company, Houston				
	Archer's Vitalife Acid Plant Foods Guarantee	3.00	4.00	11.00	\$26.70
67442	Analysis	3.03	4.47	11.32	27.80
	Agricultural Laboratories, Columbus, Ohio				
	Stim U Plant Modern Plant Food Tablet Guarantee	11.00	12.00	15.00	61.50
67806	Analysis	13.62	13.02	20.69	76.52
	American Cyanamid Company, New York, New York				
	20.6% Aero Cyanamid Granular Guarantee	20.60			49.44
67388	Analysis	20.63			49.51
	Arkansas Fertilizer Company, Little Rock, Arkansas				
	White Diamond Brand Fertilizer 10-0-10 Guarantee	10.00		10.00	37.00
67135	Analysis	10.00		10.34	37.44
	Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, Louisiana				
	Armour's Big Crop Fertilizer 4-8-4 Guarantee	4.00	8.00	4.00	25.20
66977	Analysis	4.17	8.34	3.90	25.92
67195	Analysis	3.82	11.72	3.40	28.83
67436	Analysis	4.09	8.35	4.09	26.00
67473	Analysis	4.20	8.26	4.10	26.15
67531	Analysis	4.05	8.50	4.13	26.14
67676	Analysis	4.02	8.40	3.79	25.50
67921	Analysis	3.89	8.32	4.08	25.46
	Armour's Big Crop Fertilizer 4-8-6 Guarantee	4.00	8.00	6.00	27.80
66903	Analysis	4.35	8.01	6.49	29.29
67031	Analysis	4.11	9.21	6.08	29.73
67080	Analysis	4.12	8.17	6.28	28.67

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, Louisiana—Continued					
	Armour's Big Crop Fertilizer 4-8-6 Bone Meal Base				
67111	Analysis	4.32	8.27	6.02	28.95
67150	Analysis	4.16	8.74	5.78	28.85
67172	Analysis	4.15	8.03	6.13	28.37
67223	Analysis	4.34	7.84	6.24	28.72
67381	Analysis	4.11	8.97	5.57	28.76
67435	Analysis	4.18	8.14	5.73	28.06
67594	Analysis	4.01	8.08	5.65	27.47
67621	Analysis	4.02	8.16	5.39	27.27
67754	Analysis	4.03	7.94	5.76	27.48
67764	Analysis	3.95	8.63	5.60	27.98
67794	Analysis	3.98	8.12	5.70	27.52
67797	Analysis	4.01	8.33	5.43	27.51
67841	Analysis	4.07	8.87	5.58	28.55
67900	Analysis	4.02	8.54	5.69	28.15
67935	Analysis	4.09	8.40	5.87	28.37
	Armour's Big Crop Fertilizer 4-10-0 Guarantee	4.00	10.00		22.60
67449	Analysis	3.85	10.36		22.71
	Armour's Big Crop Fertilizer 4-10-0 Bone Meal Base				
	Guarantee	4.00	10.00		\$22.60
67437	Analysis	3.88	10.04		22.36
67451	Analysis	3.98	10.32		22.97
67460	Analysis	4.18	9.99		23.02
	Armour's Big Crop Fertilizer 4-12-4 Guarantee	4.00	12.00	4.00	30.40
66883	Analysis	3.95	11.92	4.21	30.45
66975	Analysis	3.92	12.19	4.04	30.51
66988	Analysis	4.00	12.18	3.62	30.15
67032	Analysis	4.00	12.20	3.69	30.26
67047	Analysis	4.08	11.92	3.83	30.27
67079	Analysis	4.12	12.18	3.66	30.48
67203	Analysis	3.88	12.07	3.68	29.78
67221	Analysis	3.89	12.25	3.53	29.86
67237	Analysis	4.11	11.65	3.88	30.05
67256	Analysis	4.06	11.82	3.99	30.30
67257	Analysis	4.02	12.06	4.02	30.56
67285	Analysis	4.14	11.88	3.70	30.19
67289	Analysis	3.96	12.04	3.85	30.16
67298	Analysis	4.02	12.26	3.57	30.23
67305	Analysis	4.03	11.71	3.69	29.69
67313	Analysis	3.95	11.72	3.60	29.40
67324	Analysis	3.87	12.03	3.68	29.71
67340	Analysis	4.05	11.89	3.92	30.28
67345	Analysis	3.98	12.20	3.88	30.45
67358	Analysis	4.24	11.90	3.95	30.79
67361	Analysis	3.87	12.14	3.80	30.01
67387	Analysis	4.15	12.05	4.04	30.88
67394	Analysis	4.00	12.12	3.90	30.43
67434	Analysis	4.08	11.77	3.75	29.97
67472	Analysis	3.99	12.15	4.15	30.78
67532	Analysis	3.97	11.65	3.82	29.65
67543	Analysis	3.90	12.33	4.04	30.64
67566	Analysis	3.84	12.02	3.92	29.95
67576	Analysis	4.01	12.34	4.04	30.91
67620	Analysis	3.94	11.97	3.88	30.06
67727	Analysis	4.08	11.88	4.08	30.53
67851	Analysis	3.80	11.96	3.69	29.47
67861	Analysis	4.04	12.10	4.11	30.77
67882	Analysis	3.90	12.22	3.64	29.98
67887	Analysis	4.06	11.97	3.89	30.36
67943	Analysis	4.02	12.01	4.12	30.62
	Armour's Big Crop Fertilizer 5-15-0 Guarantee	5.00	15.00		31.50
66821	Analysis	5.23	15.22		32.34
66869	Analysis	5.06	15.96		32.89
66923	Analysis	5.16	15.38		32.37

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, Louisiana—Continued					
	Armour's Big Crop Fertilizer 5-15-5 Guaranteed	5.00	15.00	5.00	\$38.00
66808	Analysis	5.06	15.24	5.07	38.54
66844	Analysis	4.85	15.29	5.19	38.27
66905	Analysis	4.87	15.04	5.26	38.08
66911	Analysis	5.14	14.85	4.84	37.94
66928	Analysis	5.08	15.16	5.21	38.67
67224	Analysis	5.00	15.21	4.74	37.93
	Armour's Big Crop Fertilizer 6-8-4 Guarantee	6.00	8.00	4.00	30.00
66900	Analysis	5.87	8.42	4.07	30.33
67220	Analysis	6.09	8.43	3.46	30.08
	Armour's Big Crop Fertilizer 6-9-3 Guarantee	6.00	9.00	3.00	30.00
67055	Analysis	5.66	8.96	3.41	29.66
67238	Analysis	5.84	8.33	3.81	29.80
67737	Analysis	5.87	9.33	3.36	30.59
	Armour's Big Crop Fertilizer 6-10-7 Guarantee	6.00	10.00	7.00	36.50
66806	Analysis	5.79	10.44	6.01	35.28
66910	Analysis	5.97	10.24	6.64	36.27
66987	Analysis	6.22	10.04	7.52	37.76
67034	Analysis	6.17	10.04	7.40	37.48
67056	Analysis	5.70	10.45	7.04	36.42
67149	Analysis	6.48	10.16	6.43	37.12
67182	Analysis	6.06	10.11	7.19	37.03
67218	Analysis	6.12	10.12	6.72	36.59
67222	Analysis	6.01	10.36	5.52	35.17
67341	Analysis	6.04	10.15	7.04	36.85
67424	Analysis	6.02	10.67	5.81	35.87
67549	Analysis	6.19	10.60	6.50	37.09
67567	Analysis	5.58	10.67	6.33	35.49
67622	Analysis	6.01	9.92	7.16	36.63
67728	Analysis	6.04	10.32	6.70	36.63
67893	Analysis	5.35	10.47	6.06	34.33
67913	Analysis	6.05	10.63	7.39	37.95
67934	Analysis	5.95	12.22	5.97	37.93
67944	Analysis	5.92	10.59	7.18	37.37
	Armour's Big Crop Fertilizer 6-12-6 Guarantee	6.00	12.00	6.00	37.80
66807	Analysis	6.04	11.97	6.20	38.12
66822	Analysis	5.81	12.27	6.45	38.29
66829	Analysis	6.30	12.00	6.04	38.57
66836	Analysis	5.86	12.05	6.09	37.65
66837	Analysis	6.08	12.16	5.94	38.12
66839	Analysis	6.14	12.13	6.22	38.60
66840	Analysis	6.17	11.78	6.02	37.95
66882	Analysis	6.12	11.77	6.46	38.39
66901	Analysis	6.30	12.22	6.06	38.89
66904	Analysis	5.87	12.26	6.08	37.93
66921	Analysis	6.10	12.23	6.12	38.50
66927	Analysis	5.95	12.61	5.78	38.18
66976	Analysis	6.23	11.96	6.03	38.34
66989	Analysis	5.62	12.30	5.66	36.84
67033	Analysis	6.06	12.49	6.09	38.70
67113	Analysis	6.02	12.42	5.51	37.76
67194	Analysis	6.26	12.61	6.15	39.41
67255	Analysis	6.14	12.01	6.07	38.24
67290	Analysis	6.09	12.10	5.80	37.89
67359	Analysis	5.93	12.05	5.67	37.27
67395	Analysis	6.25	12.12	5.99	38.55
67936	Analysis	5.58	12.28	5.33	36.23
	Armour's Big Crop Fertilizer 6-24-0 Guarantee	6.00	24.00		45.60
66933	Analysis	5.81	24.37		45.62
	Armour's Big Crop Fertilizer 10-0-10 Guarantee	10.00		10.00	37.00
67798	Analysis	9.72		9.55	35.75
	Armour's Big Crop Fertilizer 20% Guarantee		20.00		26.00
67881	Analysis		19.99		25.99

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, Louisiana—Continued					
	Armour's Big Crop Fertilizer Old Black Joe Guarantee.....	4.00	8.00	4.00	25.20
66902	Analysis	4.07	8.43	3.87	25.76
66909	Analysis	4.17	8.01	3.51	24.98
66973	Analysis	4.09	8.01	3.60	24.91
66980	Analysis	4.23	7.76	3.58	24.89
67035	Analysis	4.19	7.97	3.84	25.41
67046	Analysis	4.14	8.22	3.51	25.19
67054	Analysis	4.17	8.27	4.02	25.99
67112	Analysis	4.00	8.14	3.74	25.04
67148	Analysis	3.92	8.16	3.66	24.78
67171	Analysis	3.95	8.41	4.21	25.88
67183	Analysis	4.06	7.79	4.05	25.14
67202	Analysis	4.09	8.09	3.52	24.92
67219	Analysis	4.19	7.79	3.94	25.31
67239	Analysis	4.16	8.07	3.72	25.31
67254	Analysis	4.17	8.00	3.69	25.21
67258	Analysis	4.08	8.00	3.60	24.87
67304	Analysis	4.07	8.02	3.53	24.70
67312	Analysis	4.00	8.46	4.05	25.87
67325	Analysis	4.04	8.55	3.52	25.40
67339	Analysis	4.17	8.06	3.23	24.69
67344	Analysis	4.16	8.01	3.73	25.24
67360	Analysis	4.08	8.05	3.73	25.11
67393	Analysis	4.12	8.01	4.00	25.50
67423	Analysis	4.07	8.32	4.23	26.09
67438	Analysis	4.12	8.20	3.74	25.41
67459	Analysis	4.09	7.88	3.44	24.53
67530	Analysis	4.01	7.91	3.80	24.84
67547	Analysis	4.19	8.15	3.62	25.37
67565	Analysis	4.09	8.28	4.04	25.83
67593	Analysis	4.02	8.11	3.69	24.99
67619	Analysis	3.99	8.15	3.68	24.96
67659	Analysis	4.07	8.30	3.60	25.24
67690	Analysis	3.96	8.53	4.13	25.96
67726	Analysis	4.11	8.27	4.04	\$25.86
67736	Analysis	4.01	8.26	3.90	25.43
67763	Analysis	4.10	8.46	3.79	25.77
67777	Analysis	3.94	8.45	3.69	25.25
67793	Analysis	4.06	8.02	3.40	24.59
67829	Analysis	4.03	8.27	4.04	25.67
67852	Analysis	3.97	8.18	3.64	24.89
67860	Analysis	4.02	8.06	3.62	24.84
67888	Analysis	4.06	8.21	4.16	25.82
67892	Analysis	3.89	8.46	3.45	24.83
67912	Analysis	3.96	8.38	3.85	25.40
67933	Analysis	3.92	8.47	4.07	25.71
	Armour's Big Crop Superphosphate 18% Guarantee.....		18.00		23.40
67217	Analysis		17.97		23.36
67362	Analysis		17.54		22.80
	Armour's Big Crop Superphosphate 20% Guarantee		20.00		26.00
66815	Analysis		19.58		25.45
66818	Analysis		19.74		25.66
66922	Analysis		19.75		25.68
67286	Analysis		20.05		26.07
	Armour's Big Crop Superphosphate 32% Guarantee		32.00		41.60
66861	Analysis		32.48		42.22
	Armour's Dirt Farmer Fertilizer 4-10-0 Guarantee	4.00	10.00		22.60
66974	Analysis	4.12	10.45		23.48
66978	Analysis	4.14	10.50		23.59
	Armour's Sulphate of Ammonia 20.5% Guarantee	20.50			49.20
66845	Analysis	20.61			49.46
66852	Analysis	20.84			50.02
66866	Analysis	20.82			49.97

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Armour Fertilizer Works, Houston, Fort Worth, Texas, and New Orleans, Louisiana —Continued					
Armour's Big Crop Fertilizer Old Black Joe Guaranteed—Continued					
66867	Analysis	20.84			50.02
66872	Analysis	20.71			49.70
66881	Analysis	20.65			49.56
66937	Analysis	20.80			49.92
66944	Analysis	20.60			49.44
The Barrett Company (The Salvage Process Company), New York, New York					
Arcadian the American Nitrate of Soda Guarantee					
66823	Analysis	16.00			38.40
	Analysis	16.24			38.98
Bryan Cotton Oil & Fertilizer Company, Bryan, Texas					
Star Brand Special Fertilizer Guarantee					
66895	Analysis	4.00	12.00	4.00	30.40
67293	Analysis	6.53	12.32	5.94	39.41
67298	Analysis	4.06	13.37	6.27	35.27
67878	Analysis	3.68	13.05	3.64	30.53
Star Brand 20% Superphosphate Guarantee					
66801	Analysis	20.00			\$26.00
	Analysis	20.01			26.01
Star Brand Tomato Fertilizer Guarantee					
66799	Analysis	6.00	12.00	6.00	37.80
66800	Analysis	6.26	12.51	6.55	39.80
66896	Analysis	6.49	10.26	7.82	39.09
	Analysis	5.82	11.23	6.32	36.79
Star Brand Truck Fertilizer Guarantee					
66897	Analysis	4.00	8.00	4.00	25.20
67294	Analysis	4.04	9.05	4.44	27.24
67879	Analysis	4.26	8.46	4.80	27.46
	Analysis	4.18	8.91	4.12	26.97
Campbell Fertilizer Company, Houston, Texas					
4-10-0 All-Weather Rice Fertilizer with Bone Meal Guarantee					
67447	Analysis	4.00	10.00		22.60
67450	Analysis	4.13	10.47		23.52
	Analysis	3.74	10.39		22.49
All-Weather Organic Base Fertilizer 4-8-4 Guarantee					
66893	Analysis	4.00	8.00	4.00	25.20
66946	Analysis	3.75	9.16	4.07	26.20
66969	Analysis	3.34	9.23	4.64	26.05
67335	Analysis	3.74	8.42	4.33	25.56
67405	Analysis	4.17	8.53	5.33	28.03
67425	Analysis	3.71	9.14	4.79	27.01
67448	Analysis	4.39	5.75	5.24	24.83
	Analysis	3.60	8.51	4.11	25.04
All-Weather Organic Base Fertilizer 4-8-6 Guarantee					
66880	Analysis	4.00	8.00	6.00	27.80
66890	Analysis	3.62	9.61	4.69	27.28
66948	Analysis	4.04	8.75	6.22	29.15
66968	Analysis	3.80	8.94	5.55	27.96
67414	Analysis	3.49	8.68	6.44	28.03
	Analysis	4.00	9.64	6.12	30.09
All-Weather Organic Base Fertilizer 4-12-4 Guarantee					
66947	Analysis	4.00	12.00	4.00	30.40
66967	Analysis	3.48	11.51	3.94	28.43
67338	Analysis	3.68	11.90	4.01	29.51
67426	Analysis	3.92	12.34	4.05	30.72
67452	Analysis	3.26	14.66	4.14	32.26
67880	Analysis	3.90	12.09	3.85	30.09
	Analysis	3.99	11.87	5.23	31.81
All-Weather Organic Base Fertilizer 5-15-5 Guarantee					
66914	Analysis	5.00	15.00	5.00	38.00
	Analysis	5.46	17.39	5.11	42.35
All-Weather Organic Base Fertilizer 6-10-7 Guaranteed					
66891	Analysis	6.00	10.00	7.00	36.50
	Analysis	6.67	10.79	7.23	39.44
All-Weather Organic Base Fertilizer 6-12-6 Guaranteed					
66879	Analysis	6.00	12.00	6.00	37.80
66892	Analysis	6.84	11.16	7.42	40.58
66915	Analysis	4.79	11.18	7.39	35.64
66945	Analysis	6.60	13.07	6.45	41.22
	Analysis	5.54	12.50	5.70	36.96

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Campbell Fertilizer Company, Houston, Texas—Continued					
	All-Weather 20% Superphosphate Guarantee		20.00		\$26.00
67406	Analysis		20.40		26.52
Chemi-Grow Ltd., Los Angeles, California					
	Chemi-Grow Culture Set Guarantee	7.00	9.00	25.00	61.00
67808	Analysis	8.68	9.65	27.49	69.12
Chilean Nitrate Sales Corporation, New York, New York					
	Chilean Nitrate of Soda—Champion Brand—Guaranteed	16.00			38.40
66830	Analysis	16.24			38.98
66834	Analysis	16.23			38.95
66841	Analysis	16.24			38.98
66854	Analysis	16.04			38.50
66865	Analysis	16.20			38.88
66871	Analysis	16.09			38.62
66873	Analysis	16.08			38.59
Coastal Chemical Company, Inc., Harlingen, Texas					
	Triple C Brand 5-15-5 Guarantee	5.00	15.00	5.00	38.00
66853	Analysis	4.65	10.58	4.78	31.12
	Triple C Brand 10-10-0 Guarantee	10.00	10.00		37.00
66934	Analysis	9.87	10.66		37.55
	Triple C Brand Sulphate of Ammonia Guarantee	20.50			49.20
66863	Analysis	20.75			49.80
Colloidal Minerals, Inc., Tampa, Florida					
	Soft Phosphate with Colloidal Clay Guarantee		20.00*		6.00
67867	Analysis		20.73*		6.22
The Colorado Fuel & Iron Corporation, Pueblo, Colorado					
	Silver Tip Sulphate of Ammonia Guarantee	20.50			49.20
66842	Analysis	20.27			48.65
66849	Analysis	20.73			49.75
66855	Analysis	20.53			49.27
66862	Analysis	20.54			49.30
66868	Analysis	20.56			49.34
66870	Analysis	20.69			49.66
Consolidated Chemical Industries, Inc., Houston, Texas					
	C.C.I. Brand Bone Meal Fertilizer Guarantee	4.50	15.00*		24.30
66949	Analysis	4.16	17.41*		25.65
66953	Analysis	4.45	18.56*		27.38
67440	Analysis	4.84	16.88*		26.81
	T.C.C. Brand Raw Bone Meal Guarantee	3.70	22.00*		28.68
66981	Analysis	3.29	22.23*		27.91
66982	Analysis	3.74	22.32*		29.07
67453	Analysis	3.91	21.52*		28.75
67458	Analysis	3.22	22.12*		27.64

*Total phosphoric acid.

Crockett Fertilizer Works, Crockett, Texas					
	Crescent 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	\$25.20
67011	Analysis	3.96	7.97	4.45	25.65
67540	Analysis	4.21	8.43	4.36	26.73
67884	Analysis	3.67	8.64	3.63	24.76
	Crescent 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67012	Analysis	3.95	8.06	6.52	28.44
	Crescent 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67010	Analysis	4.05	12.74	4.26	31.82
67346	Analysis	4.20	12.09	3.97	30.96
67885	Analysis	4.04	12.04	3.75	30.23
	Crescent 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	30.00
67013	Analysis	6.02	7.58	4.24	29.82
67539	Analysis	5.73	8.71	4.18	30.50
67886	Analysis	5.74	8.54	4.06	30.16
	Crescent 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67009	Analysis	6.54	10.69	7.71	39.62
	Crescent 20% Kainit Guarantee			20.00	26.00
67553	Analysis			20.10	26.13

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
	David Hardie Seed Company, Dallas, Texas				
	Hardie's All-Purpose Fertilizer Guarantee	4.00	12.00	4.00	30.40
67855	Analysis	4.15	14.24	2.57	31.81
	Hardie's Nu-Green Lawn Dressing Guarantee	10.00	6.00	4.00	37.00
67854	Analysis	10.42	6.49	4.08	38.75
	Davidson Chemical Corporation, New Orleans, Louisiana				
	Davidson Bull Dog Special 4-12-4 Guarantee	4.00	12.00	4.00	30.40
66970	Analysis	4.38	11.62	4.31	31.21
	Davidson Bull Dog Special 6-12-6 Guarantee	6.00	12.00	6.00	37.80
66971	Analysis	6.05	12.62	6.34	39.17
	E. I. Du Pont de Nemours & Company, Wilmington, Delaware				
	du Pont Uramon Fertilizer Compound Guarantee	42.00			100.80
66864	Analysis	41.97			100.73
	East Texas Cotton Oil Company, Palestine, Texas				
	Palestine Blue Star Brand 4-8-4 Fertilizer Guarantee ...	4.00	8.00	4.00	25.20
67014	Analysis	4.11	8.65	2.74	24.67
67024	Analysis	4.00	9.15	4.00	26.70
67274	Analysis	4.07	9.11	3.37	25.99
67301	Analysis	3.84	7.62	4.01	24.34
67309	Analysis	4.11	7.85	4.06	25.35
67536	Analysis	4.04	8.03	4.03	25.38
67604	Analysis	3.85	7.87	2.92	23.27
67914	Analysis	3.93	8.93	4.50	26.89
	Palestine Blue Star Brand 4-8-6 Fertilizer Guarantee.....	4.00	8.00	6.00	27.80
67022	Analysis	3.95	8.31	5.69	27.68
67300	Analysis	4.01	8.37	5.21	27.27
67336	Analysis	4.02	8.58	5.22	27.59
67603	Analysis	4.17	8.54	5.75	28.59
67916	Analysis	4.08	8.55	5.21	27.68
	East Texas Cotton Oil Company, Palestine, Texas				
	—Continued				
	Palestine Blue Star 4-10-0 Fertilizer Guarantee.....	4.00	10.00		\$22.60
67023	Analysis	4.00	10.42		23.15
	Palestine Blue Star Brand 4-12-4 Fertilizer Guarantee...	4.00	12.00	4.00	30.40
67015	Analysis	4.16	12.13	4.14	31.13
67019	Analysis	4.00	12.35	3.91	30.74
67240	Analysis	4.11	12.07	4.92	31.95
67243	Analysis	4.06	12.49	4.13	31.35
67275	Analysis	4.34	12.20	3.65	31.03
67299	Analysis	3.88	12.35	4.13	30.74
67308	Analysis	4.23	12.32	3.74	31.03
67337	Analysis	4.15	12.25	3.31	30.19
67602	Analysis	4.25	12.10	4.03	31.17
67891	Analysis	4.07	12.00	4.02	30.60
67915	Analysis	4.08	12.00	4.30	30.98
	Palestine Blue Star Brand 6-10-7 Fertilizer Guarantee....	6.00	10.00	7.00	36.50
67020	Analysis	5.61	8.69	4.39	30.47
	Palestine Blue Star Brand 6-10-7 Fertilizer Guarantee....	6.00	10.00	7.00	35.60
67244	Analysis	5.93	9.92	6.53	35.60
67537	Analysis	5.71	10.43	5.71	34.68
67917	Analysis	5.84	10.16	7.48	36.95
	Palestine Blue Star Brand 6-12-6 Fertilizer Guarantee....	6.00	12.00	6.00	37.80
67021	Analysis	5.91	12.55	6.14	38.48
	Palestine Blue Star Brand 20% Superphosphate				
	Guarantee		20.00		26.00
67025	Analysis		20.38		26.49
	East Texas Cotton Oil Company, Tyler, Texas				
	ETCO 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67627	Analysis	4.08	8.58	5.61	28.23
67629	Analysis	4.35	8.31	6.04	29.09
	ETCO 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67630	Analysis	4.53	12.00	4.05	31.74
	Golden Rod Brand 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67626	Analysis	4.00	7.11	3.22	23.03
67628	Analysis	3.77	8.07	4.21	25.01

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
East Texas Cotton Oil Company, Tyler, Texas					
Golden Rod Brand 4-8-4 Fertilizer Guarantee—Continued					
67842	Analysis	4.15	8.39	3.41	25.30
	Golden Rod Brand 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67058	Analysis	4.08	8.01	5.19	26.95
67060	Analysis	4.02	9.36	6.05	29.69
	Golden Rod Brand 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67057	Analysis	4.23	12.51	4.06	31.69
67059	Analysis	4.22	12.86	4.04	32.10
67843	Analysis	3.96	12.65	4.13	31.32
	Golden Rod 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	30.00
67947	Analysis	5.58	8.35	4.51	30.11
	Golden Rod Brand 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67844	Analysis	5.89	10.22	7.01	36.54
	Golden Rod 10-0-10 Fertilizer Guarantee	10.00		10.00	37.00
67937	Analysis	9.90		7.91	34.04
Farm Service, Inc., Opelousas, Louisiana					
	Thorobred Brand 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	\$25.20
67932	Analysis	3.78	8.31	4.02	25.10
Farmers Cotton Oil Company, Winnsboro, Texas					
	Farmers Fertilizer 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67163	Analysis	4.08	8.87	6.09	29.24
	Farmers Fertilizer 4-12-4 Guarantee	4.00	12.00	4.00	30.40
67821	Analysis	4.32	12.21	3.64	30.97
	Farmers Fertilizer 6-8-4 Guarantee	6.00	8.00	4.00	30.00
67822	Analysis	6.26	7.87	4.54	31.15
	Farmers Fertilizer 6-10-7 Guarantee	6.00	10.00	7.00	36.50
67165	Analysis	6.04	9.98	7.15	36.77
	Farmers Fertilizer 6-12-6 Guarantee	6.00	12.00	6.00	37.80
67164	Analysis	6.16	11.06	7.23	38.56
67823	Analysis	6.22	10.61	7.21	38.09
Federal Chemical Company, Inc., Shreveport, Louisiana					
	Federal 4-8-4 Guarantee	4.00	8.00	4.00	25.20
66991	Analysis	4.36	8.43	4.61	27.41
67008	Analysis	4.99	8.60	5.36	30.13
67018	Analysis	4.11	7.77	4.14	25.34
67101	Analysis	3.92	8.62	4.04	25.87
67114	Analysis	4.08	7.93	3.83	25.08
67126	Analysis	4.14	7.90	3.80	25.15
67166	Analysis	4.08	6.89	4.22	24.24
67528	Analysis	3.74	8.90	3.59	25.22
67541	Analysis	4.06	8.43	3.97	25.86
67544	Analysis	4.06	8.39	3.85	25.66
67577	Analysis	4.09	8.19	4.06	25.75
67585	Analysis	4.01	8.24	4.09	25.65
67596	Analysis	4.00	8.41	3.91	25.61
67691	Analysis	3.87	8.34	3.70	24.94
67719	Analysis	4.02	8.84	5.13	27.81
67738	Analysis	4.10	8.34	4.04	25.93
67751	Analysis	4.03	8.15	4.05	25.54
67771	Analysis	3.97	8.41	4.31	26.06
67889	Analysis	3.88	8.84	3.78	25.71
67922	Analysis	3.82	8.66	4.05	25.70
67941	Analysis	3.94	8.62	3.88	25.71
67954	Analysis	3.96	8.36	4.45	26.16
67956	Analysis	3.95	9.07	3.78	26.18
67966	Analysis	4.06	8.52	3.88	25.86
	Federal 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67061	Analysis	3.88	9.06	5.33	28.02
67102	Analysis	3.90	8.64	5.38	27.58
67127	Analysis	4.10	8.59	5.40	28.03
67151	Analysis	4.14	8.39	5.37	27.83
67155	Analysis	4.22	7.77	6.03	28.07
67167	Analysis	4.18	7.79	6.01	27.97
67586	Analysis	4.00	8.14	6.05	28.05
67597	Analysis	4.40	8.31	5.43	28.42

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Federal Chemical Company, Inc., Shreveport					
Louisiana—Continued					
Federal 4-8-6 Guarantee—Continued					
67739	Analysis	4.00	8.91	5.61	28.47
67750	Analysis	4.13	8.01	5.41	\$27.35
67772	Analysis	4.20	8.92	5.62	28.99
67827	Analysis	4.07	8.03	5.50	27.36
67927	Analysis	4.15	8.09	5.32	27.40
67942	Analysis	4.16	8.69	5.52	28.46
67955	Analysis	4.07	8.17	5.48	27.51
67968	Analysis	4.08	8.97	6.07	29.34
Federal 4-12-4 Guarantee					
67116	Analysis	4.00	12.00	4.00	30.40
67168	Analysis	4.04	11.74	4.38	30.65
67520	Analysis	4.16	11.99	4.34	31.21
67545	Analysis	4.19	11.69	4.22	30.75
67578	Analysis	4.32	12.14	4.49	31.99
67828	Analysis	4.23	11.90	4.34	31.26
67890	Analysis	4.12	11.24	4.36	30.17
67928	Analysis	3.90	12.16	3.60	29.85
67957	Analysis	3.65	11.22	4.06	28.63
67967	Analysis	4.24	11.70	4.15	30.79
Federal 6-9-3 Guarantee					
67062	Analysis	3.97	11.76	4.06	30.10
67099	Analysis	6.00	9.00	3.00	30.00
Federal 6-10-7 Guarantee					
66990	Analysis	5.17	8.99	3.70	28.91
67007	Analysis	6.10	9.08	3.32	30.76
67100	Analysis	6.00	10.00	7.00	36.50
67546	Analysis	6.26	10.58	7.04	37.92
67923	Analysis	6.21	10.32	7.16	37.63
Federal 6-12-6 Guarantee					
67115	Analysis	6.05	10.02	7.32	37.07
67617	Analysis	6.31	10.21	7.11	37.65
67692	Analysis	6.14	10.12	7.05	37.07
Federal 20% Superphosphate Guarantee					
67529	Analysis	6.00	12.00	6.00	37.80
Fidelity Chemical Corporation, Houston, Texas					
Ferti-Lome, Specially prepared for St. Augustine					
and Bermuda Lawns Guarantee					
66889	Analysis	5.55	12.47	5.42	36.58
66931	Analysis	6.02	11.88	6.03	37.73
67196	Analysis	6.18	11.72	6.11	38.01
67353	Analysis	20.00			26.00
67367	Analysis	19.99			25.99
67853	Analysis	6.00	12.00	4.00	35.20
Fidelity Bone Meal Guarantee					
66942	Analysis	6.56	11.70	4.73	37.10
Fidelity 3-10-3 Fertilizer Guarantee					
66972	Analysis	5.91	12.29	4.69	36.26
*Total phosphoric acid.					
Fidelity 4-8-4 Fertilizer Guarantee					
66966	Analysis	5.35	12.49	4.46	34.88
67262	Analysis	6.04	12.71	4.38	36.71
67272	Analysis	6.00	11.81	4.65	35.80
67279	Analysis	5.60	11.49	4.46	34.18
67292	Analysis	3.70	22.00*		28.68
67307	Analysis	4.06	21.58*		29.16
67331	Analysis	3.00	10.00	3.00	24.10
67342	Analysis	3.49	9.77	3.39	25.49
67495	Analysis	4.00	8.00	4.00	\$25.20
67519	Analysis	4.32	8.56	4.33	27.13
67538	Analysis	4.52	8.41	4.57	27.72
	Analysis	4.39	7.82	4.21	26.18
	Analysis	4.19	8.69	3.82	26.33
	Analysis	4.19	8.25	4.33	26.42
	Analysis	4.26	8.23	4.21	26.39
	Analysis	4.07	8.52	4.06	26.13
	Analysis	4.28	8.09	4.15	26.19
	Analysis	4.17	8.73	3.70	26.17
	Analysis	4.18	8.36	4.82	27.17
	Analysis	4.09	8.75	4.17	26.62

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Fidelity Chemical Corporation, Houston, Texas—Continued					
67555	Analysis	4.08	8.87	4.04	26.57
67898	Analysis	4.37	8.27	4.08	26.54
67903	Analysis	3.89	8.69	4.11	25.98
	Fidelity 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
66887	Analysis	4.40	8.66	6.06	29.70
66940	Analysis	4.38	8.45	6.55	30.03
66963	Analysis	4.39	8.41	6.08	29.37
67350	Analysis	4.53	9.41	5.29	29.98
67411	Analysis	4.47	7.69	5.69	28.13
67523	Analysis	4.64	8.39	5.96	29.80
67905	Analysis	4.38	9.01	6.46	30.62
	Fidelity 4-10-0 Fertilizer Guarantee	4.00	10.00		22.60
66957	Analysis	4.06	10.11		22.88
67445	Analysis	4.19	9.77		22.76
	Fidelity 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
66899	Analysis	4.25	11.46	4.19	30.55
66964	Analysis	4.19	11.15	4.26	30.10
67264	Analysis	4.24	11.66	4.18	30.77
67271	Analysis	4.49	12.23	4.24	32.25
67291	Analysis	4.29	12.15	4.11	31.44
67306	Analysis	4.26	12.33	4.07	31.54
67321	Analysis	4.13	11.40	3.77	29.63
67329	Analysis	4.30	11.16	4.25	30.36
67397	Analysis	4.49	12.06	4.09	31.78
67413	Analysis	3.92	11.82	4.03	30.08
67461	Analysis	4.31	12.32	4.55	32.28
67518	Analysis	3.95	12.07	4.23	30.73
67870	Analysis	3.98	12.11	4.24	30.80
67899	Analysis	4.08	11.96	4.27	30.89
	Fidelity 5-15-0 Fertilizer Guarantee	5.00	15.00		31.50
66929	Analysis	5.45	14.68		32.16
66958	Analysis	5.38	15.28		32.77
	Fidelity 5-15-5 Fertilizer Guarantee	5.00	15.00	5.00	38.00
66877	Analysis	5.35	13.56	5.94	38.19
66932	Analysis	5.86	13.31	5.49	38.50
66960	Analysis	5.10	14.29	5.30	37.71
67444	Analysis	5.22	14.72	5.08	38.27
	Fidelity 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	\$30.00
66962	Analysis	6.31	8.13	4.28	31.27
67904	Analysis	6.09	8.34	4.20	30.92
	Palestine Blue Star Brand 6-9-3 Fertilizer Guarantee...	6.00	10.00	7.00	36.50
66961	Analysis	6.20	8.90	3.34	30.79
67496	Analysis	6.08	9.13	3.12	30.52
	Palestine Blue Star Brand 6-10-7 Fertilizer Guarantee...	6.00	10.00	7.00	36.50
66941	Analysis	6.38	9.61	7.15	37.10
66959	Analysis	6.22	10.03	7.16	37.28
67261	Analysis	6.35	10.12	7.30	37.89
67332	Analysis	6.28	10.58	6.45	37.21
67352	Analysis	6.18	9.83	6.77	36.41
67366	Analysis	6.31	9.75	7.20	37.18
67497	Analysis	6.01	10.28	6.58	36.33
67524	Analysis	6.29	9.92	7.12	37.26
67554	Analysis	5.97	10.26	7.10	36.90
	Fidelity 6-12-6 Fertilizer Guarantee	6.00	12.00	6.00	37.80
66835	Analysis	6.41	11.55	6.42	38.75
66888	Analysis	6.27	11.08	6.63	38.07
66956	Analysis	6.07	11.58	6.37	37.90
67229	Analysis	6.36	11.73	6.04	38.36
67270	Analysis	6.22	11.81	6.20	38.34
67396	Analysis	6.34	11.80	6.19	38.61
67412	Analysis	5.99	11.66	6.09	37.46
67443	Analysis	6.04	11.38	6.11	37.23
67522	Analysis	6.28	11.74	6.08	38.23

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Fidelity Chemical Corporation, Houston, Texas—Continued					
	Fidelity 10-10-0 Fertilizer Guarantee	10.00	10.00		37.00
66965	Analysis	10.00	10.18		37.23
	Fidelity 10-20-10 Fertilizer Guarantee	10.00	20.00	10.00	63.00
67330	Analysis	9.96	20.55	10.05	63.69
67446	Analysis	10.16	19.65	10.22	63.22
	Fidelity 12-18-0 Fertilizer Guarantee	12.00	18.00		52.20
66874	Analysis	11.57	18.22		51.46
	Fidelity 18% Superphosphate Guarantee		18.00		23.40
66913	Analysis		20.12		26.16
66939	Analysis		20.54		26.70
66950	Analysis		18.42		23.95
67343	Analysis		20.82		27.07
	Fidelity 20% Superphosphate Guarantee		20.00		26.00
66898	Analysis		20.80		27.04
66930	Analysis		20.31		26.40
67263	Analysis		21.06		27.38
67280	Analysis		20.79		27.03
67351	Analysis		21.22		27.59
67462	Analysis		19.91		25.88
Ford Motor Company, Dearborn, Michigan					
	Ford Ammonium Sulphate Guarantee	20.80			\$49.92
67441	Analysis	20.91			50.18
Gilmer Cotton Oil & Fertilizer Company, Gilmer, Texas					
	Texas Longhorn Cotton Surecrop Guarantee	4.00	8.00	4.00	25.20
67145	Analysis	4.33	8.30	4.03	26.42
67811	Analysis	3.95	8.11	4.86	26.34
67958	Analysis	4.42	8.25	4.10	26.67
	Texas Longhorn Peanut Special Guarantee		12.00	4.00	20.80
67812	Analysis		12.20	5.25	22.69
	Texas Longhorn Special Cotton Surecrop Guarantee	6.00	12.00	6.00	37.80
67147	Analysis	5.91	11.00	6.10	36.41
	Texas Longhorn Sure Crop Producer Guarantee	4.00	12.00	4.00	30.40
67959	Analysis	4.18	11.64	4.31	30.76
	Texas Longhorn Sure Crop Truckers Best Guarantee	6.00	10.00	7.00	36.50
67146	Analysis	5.95	9.97	7.26	36.68
	Texas Longhorn Tomato Surecrop Guarantee	4.00	8.00	6.00	27.80
67144	Analysis	4.32	8.14	5.26	27.79
67961	Analysis	4.46	8.33	5.62	28.84
	Texas Longhorn Yam Surecrop Guarantee	4.00	8.00	10.00	33.00
67813	Analysis	4.33	7.71	9.62	32.92
67960	Analysis	4.00	8.42	10.07	33.64
City of Houston Engineering Department, Houston, Texas					
	Hu-Actinite 5.5-2.0-0 Guarantee	5.50	2.00		15.80
66878	Analysis	4.37	2.77		14.09
66951	Analysis	4.53	2.97		14.73
Hydroponic Chemical Company, Inc., New York, New York					
	Hyponex Plant Food Guarantee	7.00	6.00	19.00	49.30
67804	Analysis	7.20	6.71	20.00	52.00
International Minerals & Chemical Corporation, Texarkana, Arkansas-Texas					
	International 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67027	Analysis	4.16	8.53	4.03	26.31
67123	Analysis	4.03	8.70	4.05	26.25
67132	Analysis	4.06	8.45	4.18	26.16
67136	Analysis	4.11	8.35	4.28	26.28
67373	Analysis	4.00	8.21	4.26	25.81
67498	Analysis	3.95	8.25	3.89	25.27
67600	Analysis	3.98	8.43	4.36	26.18
67649	Analysis	3.74	8.57	3.68	24.90
67696	Analysis	4.08	8.50	4.09	26.16
67702	Analysis	4.00	8.33	4.02	25.66
67722	Analysis	4.02	9.06	3.73	26.28
67729	Analysis	4.00	8.30	4.04	25.64

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
International Minerals & Chemical Corporation, Arkansas-Texas—Continued					
67752	Analysis	4.08	7.80	4.10	25.26
67759	Analysis	3.94	8.36	4.02	25.56
67765	Analysis	4.58	8.50	3.76	26.93
67784	Analysis	3.95	8.89	3.64	25.77
	International 4-8-4 Olde Tyme Fertilizer Guarantee	4.00	8.00	4.00	\$25.20
67074	Analysis	3.94	8.21	4.13	25.50
	International 4-8-6 Premium Fertilizer Guarantee	4.00	8.00	6.00	27.80
67825	Analysis	3.97	8.19	5.83	27.82
	International 4-8-6 Truck Fertilizer Guarantee	4.00	8.00	6.00	27.80
67093	Analysis	3.99	8.01	6.02	27.82
67122	Analysis	4.13	8.23	5.60	27.89
67137	Analysis	4.09	8.23	6.20	28.58
67160	Analysis	4.04	8.33	5.82	28.10
67372	Analysis	3.96	8.38	6.07	28.28
67499	Analysis	4.12	8.21	5.69	27.96
67571	Analysis	4.04	8.43	5.65	28.01
67642	Analysis	3.95	9.05	6.47	29.66
67723	Analysis	4.00	8.38	5.60	27.77
67753	Analysis	4.06	8.58	6.05	28.76
67760	Analysis	3.99	8.15	5.84	27.77
67767	Analysis	4.27	8.41	5.65	28.53
67786	Analysis	3.95	8.35	5.61	27.63
67819	Analysis	3.93	8.59	6.05	28.47
	International 4-8-10 Fertilizer Guarantee	4.00	8.00	10.00	33.00
67161	Analysis	4.06	8.23	8.83	31.92
67820	Analysis	4.04	8.41	10.27	33.98
	International 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67072	Analysis	4.14	12.05	4.08	30.91
	International 4-12-4 Rainbow Cotton Fertilizer Guarantee	4.00	12.00	4.00	30.40
67189	Analysis	4.11	12.46	4.02	31.29
67374	Analysis	4.00	12.56	4.05	31.20
67650	Analysis	3.92	12.12	4.04	30.42
67695	Analysis	4.07	12.29	4.13	31.12
67766	Analysis	3.94	12.36	4.05	30.80
67778	Analysis	3.97	12.77	4.16	31.54
67826	Analysis	4.19	12.37	4.15	31.54
	International 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67067	Analysis	5.70	10.71	6.71	36.32
67073	Analysis	5.89	10.09	6.79	36.09
67092	Analysis	6.16	10.03	7.14	37.10
67162	Analysis	5.94	10.51	7.40	37.54
67188	Analysis	6.03	9.66	7.10	36.26
67601	Analysis	5.96	10.62	6.76	36.90
67761	Analysis	6.06	10.60	7.08	37.52
	International 6-12-6 Fertilizer Guarantee	6.00	12.00	6.00	37.80
67572	Analysis	6.19	12.53	6.18	39.18
	International 20% Superphosphate Guarantee		20.00		26.00
67768	Analysis		21.91		28.48
Jacksonville Fertilizer Company, Jacksonville, Texas					
	Red Tomato 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	\$25.20
67929	Analysis	4.11	9.26	4.40	27.62
	Red Tomato 4-8-10 Fertilizer Guarantee	4.00	8.00	10.00	33.00
67796	Analysis	4.16	9.18	9.42	34.16
67931	Analysis	4.12	8.03	10.07	33.42
	Red Tomato 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67930	Analysis	4.28	12.25	4.44	31.97
Kelly-Weber & Company, Inc., Lake Charles, Louisiana					
	Weber-King Brand Fertilizer Special 4-8-4 Guarantee	4.00	8.00	4.00	25.20
67901	Analysis	4.37	8.33	4.57	27.26
	Weber-King Brand Fertilizer Special 4-12-4 Guarantee	4.00	12.00	4.00	30.40
67902	Analysis	5.05	11.20	4.32	32.30

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
66966	Weber-King Brand Fertilizer Special 6-10-7 Guarantee....	6.00	10.00	7.00	36.50
67926	Analysis	5.56	10.97	6.86	36.52
	Analysis	5.69	9.82	6.68	35.11
	Longview Cotton Oil Company, Longview, Texas				
	Longview Cotton and Corn Special Fertilizer High Grade Guarantee	4.00	12.00	4.00	30.40
67096	Analysis	4.15	11.65	4.20	30.57
67688	Analysis	4.06	12.03	4.21	30.85
	Longview Gregg County Special High Grade Guarantee..	4.00	8.00	4.00	25.20
67094	Analysis	4.14	7.80	4.43	25.84
67680	Analysis	4.02	7.61	3.59	24.21
67686	Analysis	4.14	8.56	3.68	25.85
	Longview Potash Special High Grade Guarantee	12.00	4.00	20.80	
67689	Analysis	11.66	4.08	20.46	
67952	Analysis	12.46	4.18	21.63	
	Longview Prize Fertilizer High Grade Guarantee	6.00	12.00	6.00	37.80
67098	Analysis	5.67	11.45	6.07	36.39
67687	Analysis	5.93	12.40	5.64	37.68
	Longview Truck Special Fertilizer High Grade Guarantee	4.00	8.00	6.00	27.80
67095	Analysis	3.94	7.90	5.97	27.49
67953	Analysis	3.94	8.18	5.19	26.84
	Longview Vegetable Fertilizer High Grade Guarantee..	6.00	10.00	7.00	36.50
67097	Analysis	6.00	9.17	7.48	36.04
	Marshall Cotton Oil Company, Marshall, Texas				
	Marshall 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67108	Analysis	4.11	8.00	3.86	25.28
67503	Analysis	4.06	8.27	3.80	25.43
67697	Analysis	3.70	7.72	3.68	23.70
	Marshall 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67106	Analysis	4.16	7.42	5.72	27.07
	Marshall Cotton Oil Company, Marshall, Texas—Continued				
	Marshall 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67504	Analysis	4.41	11.28	4.03	30.48
67699	Analysis	4.03	12.41	4.09	31.12
	Marshall 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	30.00
67107	Analysis	6.08	8.12	3.58	29.80
67698	Analysis	5.47	7.86	4.31	28.95
	Marshall 6-9-3 Fertilizer Guarantee	6.00	9.00	3.00	30.00
67110	Analysis	5.97	9.22	3.10	30.35
67505	Analysis	6.05	8.68	3.17	29.92
	Marshall 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67701	Analysis	5.88	9.77	6.70	35.52
	Marshall 6-12-6 Fertilizer Guarantee	6.00	12.00	6.00	37.80
67700	Analysis	5.94	11.40	6.28	37.24
	Marshall Super & Meal Fertilizer 4-10-0 Guarantee	4.00	10.00		22.60
67109	Analysis	3.68	10.71		22.75
	Mixson Brothers, Kirbyville, Texas				
	Jasco Brand Special No. 4-8-4 Guarantee	4.00	8.00	4.00	25.20
67468	Analysis	3.85	9.08	3.43	25.50
	Jasco Brand Special No. 4-8-6 Guarantee	4.00	8.00	6.00	27.80
66985	Analysis	3.86	7.50	5.73	26.46
	Jasco Brand Special No. 4-12-4 Guarantee	4.00	12.00	4.00	30.40
66984	Analysis	4.04	12.27	4.28	31.21
67470	Analysis	4.06	11.84	4.08	30.43
67918	Analysis	3.76	11.68	4.17	29.62
	Jasco Brand Special No. 6-10-7 Guarantee	6.00	10.00	7.00	36.50
66986	Analysis	6.77	9.76	6.61	37.53
67469	Analysis	6.67	9.56	6.42	36.79
67919	Analysis	5.75	10.30	6.54	35.69
	Jasco Brand Special No. 6-12-6 Guarantee	6.00	12.00	6.00	37.80
66983	Analysis	6.00	12.37	6.58	39.03
67471	Analysis	5.92	12.21	5.97	37.84
67920	Analysis	5.94	12.45	5.54	37.65

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
New Jersey Fertilizer Company, Jersey City, New Jersey					
67807	N. J. Brand Bone Fertilizer Guarantee	2.47	24.00*		27.53
	Analysis	3.15	24.31*		29.44
Nicholson's Seed Store, Dallas, Texas					
67197	Nicholson's All-Round Fertilizer Guarantee	4.00	12.00	4.00	30.40
	Analysis	4.18	12.46	4.10	31.56
67198	Nicholson's Evergreen Lawn Dressing Guarantee	10.00	6.00	4.00	37.00
	Analysis	10.32	6.46	3.89	38.23
Oil Mill & Fertilizer Works, Henderson, Texas					
67084	Wolf Brand Fertilizer 4-8-4 Guarantee	4.00	8.00	4.00	25.20
	Analysis	4.10	8.05	3.90	25.38
67651	Analysis	4.08	8.20	3.74	25.31
67664	Analysis	4.11	8.13	3.68	25.21
67948	Analysis	4.23	8.06	4.25	26.16
*Total phosphoric acid.					
67083	Wolf Brand Fertilizer 4-12-4 Guarantee	4.00	12.00	4.00	30.40
	Analysis	4.15	12.67	4.44	32.20
67082	Wolf Brand Fertilizer 6-8-4 Guarantee	6.00	8.00	4.00	30.00
	Analysis	5.81	8.12	4.46	30.30
67069	Wolf Brand Fertilizer 6-9-3 Guarantee	6.00	9.00	3.00	30.00
	Analysis	4.80	10.05	3.03	28.53
67070	Wolf Brand Fertilizer 6-10-7 Guarantee	6.00	10.00	7.00	36.50
	Analysis	5.79	10.11	6.89	36.00
67665	Wolf Brand Fertilizer 6-12-6 Guarantee	5.37	10.78	6.29	35.08
	Analysis	6.00	12.00	6.00	37.80
67081	Analysis	5.45	11.82	6.28	36.61
67652	Wolf Brand Fertilizer 10-0-10 Guarantee	5.59	12.11	5.67	36.53
	Analysis	10.00		10.00	37.00
67653	Analysis	10.01		6.62	32.63
67654	Wolf Brand Superphosphate 20% Guarantee		20.00		26.00
	Analysis		20.65		26.85
67666	Analysis		20.92		27.20
Pate Bros. Fertilizer Works, Sulphur Springs, Texas					
67785	Pate's 3-10-3 Guarantee	3.00	10.00	3.00	24.10
	Analysis	3.37	10.71	3.21	26.18
67179	Pate's 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
	Analysis	4.02	7.84	4.28	25.40
67369	Analysis	4.02	7.59	4.45	25.31
67715	Analysis	3.73	7.94	4.45	25.06
67741	Analysis	3.86	8.23	3.88	25.00
67770	Analysis	3.89	8.34	4.12	25.54
67780	Analysis	4.01	8.22	4.17	25.73
67790	Analysis	3.80	8.24	4.07	25.12
67176	Pate's 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
	Analysis	4.36	7.37	6.16	28.05
67370	Analysis	4.31	7.84	5.80	28.07
67716	Analysis	3.87	7.92	6.05	27.46
67742	Analysis	4.08	8.07	6.04	28.13
67769	Analysis	3.68	8.06	6.07	27.20
67782	Analysis	4.04	8.00	6.04	27.95
67791	Analysis	3.77	8.55	6.08	28.07
	Pate's 4-8-10 Guarantee	4.00	8.00	10.00	33.00
67177	Analysis	4.86	7.81	10.12	34.97
67783	Analysis	3.83	7.96	10.06	32.62
67178	Pate's 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
	Analysis	4.11	11.94	4.92	31.78
67781	Analysis	4.08	11.76	4.46	30.88
67371	Pate's 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
	Analysis	6.14	10.97	7.23	38.40
67792	Analysis	5.97	12.29	6.53	38.80
Pittsburg Cotton Oil Company, Pittsburg, Texas					
67142	4-8-4 Double Circle Fertilizer Guarantee	4.00	8.00	4.00	25.20
	Analysis	4.35	7.89	4.47	26.51

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
67814	Analysis	4.17	8.05	4.14	25.86
67832	Analysis	4.54	8.20	4.35	27.22
67886	4-8-6 Double Circle Fertilizer Guarantee	4.00	8.00	6.00	27.80
67815	Analysis	4.19	8.14	6.08	28.54
67831	Analysis	4.38	6.95	7.14	28.83
67141	4-8-10 Double Circle Fertilizer Guarantee	3.97	9.28	6.02	29.42
67816	Analysis	4.00	8.00	10.00	33.00
67143	Analysis	4.14	7.89	10.70	34.11
67154	6-8-4 Double Circle Fertilizer Guarantee	4.13	8.31	10.31	34.11
67140	Analysis	6.00	8.00	4.00	30.00
67153	6-8-8 Double Circle Fertilizer Guarantee	5.50	7.67	4.34	28.81
	Analysis	6.00	8.00	8.00	35.20
	6-10-7 Double Circle Fertilizer Guaranteed	6.01	8.57	7.21	34.93
	Analysis	6.00	10.00	7.00	36.50
	Analysis	5.56	9.16	6.97	34.31
	Analysis	5.32	8.60	6.57	32.49
	Plantabbs Company, Baltimore, Maryland				
	Fulton's Plantabbs 11-15-20 Guarantee	11.00	15.00	20.00	71.90
67368	Analysis	11.49	19.44	23.68	83.63
	Port Fertilizer Company, Los Fresnos, Texas				
	Granulated 20% Superphosphate Guarantee		20.00		26.00
66876	Analysis		21.03		27.34
	Valley Port Brand 5-15-0 Fertilizer Guarantee	5.00	15.00		31.50
66859	Analysis	5.02	15.12		31.71
	Valley Port Brand 6-24-0 Fertilizer Guarantee	6.00	24.00		45.60
66846	Analysis	6.56	23.10		45.77
66857	Analysis	6.51	21.53		43.61
	Valley Port Brand 10-10-0 Fertilizer Guarantee	10.00	10.00		37.00
66860	Analysis	10.30	9.75		37.40
66936	Analysis	8.24	11.82		35.15
	Valley Port Brand 12-18-0 Fertilizer Guarantee	12.00	18.00		52.20
66843	Analysis	12.35	17.27		52.09
	Valley Port Brand 20% Superphosphate Guarantee		20.00		26.00
66847	Analysis		21.37		27.78
66850	Analysis		21.34		27.74
66935	Analysis		20.68		26.88
66938	Analysis		20.41		26.53
	Valley Port Brand 32% Superphosphate Guarantee		32.00		41.60
66848	Analysis		31.66		41.16
66856	Analysis		30.75		39.98
	Valley Port Superphosphate Sulphur Mixture				
	—Guarantee		10.00	50.00*	
66858	Analysis		10.89	50.90*	
	The Pulverized Manure Company, Chicago, Illinois				
	Wizard Brand Pulverized Sheep Manure Guaranteed	2.00	1.00	2.00	8.70
66886	Analysis	1.96	1.32	2.99	10.81
	Ra-Pid-Gro Corporation, Dansville, New York				
	*Sulphur				
	Vitamin B, Ra-Pid-Gro Liquid Plant Food Guarantee	23.00	27.00	17.00	112.40
67810	Analysis	21.95	23.02	16.48	104.03
	*Sulphur				
	Shreveport Fertilizer Works, Shreveport, Louisiana				
	Lion 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
66995	Analysis	4.08	10.81	4.16	29.25
67193	Analysis	3.92	8.23	4.34	25.75
67467	Analysis	3.91	8.18	3.59	24.63
67583	Analysis	3.77	8.39	4.00	25.16
67660	Analysis	3.93	8.09	3.56	24.58
67720	Analysis	3.80	8.05	4.18	25.02
67732	Analysis	4.01	9.55	4.22	27.53
67757	Analysis	4.34	8.33	4.20	26.71

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
67787	Analysis	4.06	8.87	4.01	26.48
67835	Analysis	3.94	8.97	4.16	26.53
	Lion 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67139	Analysis	3.99	7.38	6.25	27.30
67169	Analysis	3.89	7.73	4.68	25.47
67192	Analysis	3.67	7.25	5.99	26.03
67378	Analysis	4.08	8.08	4.95	26.73
67582	Analysis	3.90	7.76	6.28	27.61
67661	Analysis	3.90	8.24	6.02	27.90
67721	Analysis	3.96	8.46	6.05	28.37
67733	Analysis	3.85	8.40	5.36	27.13
67746	Analysis	4.15	8.97	5.73	29.07
67749	Analysis	3.99	8.85	5.22	27.88
67758	Analysis	5.24	9.61	6.54	33.57
67788	Analysis	3.95	8.35	5.40	27.36
	Lion 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67466	Analysis	3.75	11.35	4.30	29.35
	Lion N.P.K. 23 Fertilizer Guarantee	6.00	10.00	7.00	36.50
66994	Analysis	6.37	10.05	7.04	37.51
67028	Analysis	6.43	10.33	7.29	38.84
67086	Analysis	6.37	10.56	7.05	38.19
67138	Analysis	6.30	10.17	7.46	38.04
67170	Analysis	6.53	10.58	6.63	38.04
67191	Analysis	6.40	9.49	8.29	38.48
67379	Analysis	6.49	10.17	7.21	38.17
67465	Analysis	6.29	10.21	7.10	37.60
67745	Analysis	6.21	10.67	6.30	36.96
67789	Analysis	5.79	10.22	6.64	35.82
	Lion 20% Superphosphate Guarantee		20.00		26.00
67265	Analysis		20.50		26.65
67592	Analysis		21.89		28.46
67779	Analysis		21.86		28.42
	Longhorn 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
66998	Analysis	3.89	7.79	3.65	24.22
67180	Analysis	4.00	7.45	3.50	23.83
67348	Analysis	3.75	7.54	3.84	23.79
67500	Analysis	4.01	8.03	4.06	25.34
67510	Analysis	4.55	8.34	3.73	26.61
67674	Analysis	4.65	9.09	3.91	28.06
67838	Analysis	4.07	9.40	3.85	27.00
67909	Analysis	3.98	8.70	4.19	26.31
	Longhorn 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67573	Analysis	3.96	8.74	5.69	28.26
	Longhorn 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
66992	Analysis	4.11	12.04	4.06	30.79
67349	Analysis	4.11	11.45	4.00	29.95
67480	Analysis	3.82	11.88	4.43	30.37
67501	Analysis	4.11	11.95	3.62	30.11
67506	Analysis	3.91	11.24	4.34	29.63
67511	Analysis	4.06	12.12	3.46	30.00
67673	Analysis	3.96	11.88	4.33	30.57
67910	Analysis	4.06	12.05	4.07	30.70
	Longhorn 6-9-3 Fertilizer Guarantee	6.00	9.00	3.00	30.00
67481	Analysis	6.07	10.37	2.26	30.99
	Longhorn N.P.K. 23 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67071	Analysis	6.43	9.63	7.48	37.67
67181	Analysis	6.05	10.11	6.87	36.59
67347	Analysis	6.20	10.04	7.37	37.51
67482	Analysis	6.17	9.89	7.36	37.24
67502	Analysis	5.97	10.54	6.95	37.07
67507	Analysis	6.06	10.13	7.22	37.10
67512	Analysis	6.49	10.16	6.52	37.27
67675	Analysis	6.15	10.51	6.47	36.83
67839	Analysis	6.33	11.34	7.47	39.64

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Shreveport Fertilizer Works, Shreveport, Louisiana—Continued					
67483	Longhorn 20% Superphosphate Guarantee		20.00		26.00
	Analysis		19.95		25.94
Southwestern Peanut Growers Association, Gorman, Texas					
	Pabak Brand 0-12-4 Fertilizer Guarantee		12.00	4.00	20.80
67215	Analysis		12.49	3.78	21.15
67864	Analysis		12.58	4.10	21.68
	Pabak Brand 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67211	Analysis	4.12	8.54	4.18	26.42
67227	Analysis	3.83	8.32	3.67	24.78
67865	Analysis	4.08	8.57	3.53	25.52
	Pabak Brand 4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67210	Analysis	3.61	12.27	3.54	29.21
67212	Analysis	3.96	11.58	3.93	29.66
67225	Analysis	3.98	11.81	4.04	30.15
67866	Analysis	4.09	12.35	3.63	30.66
67869	Analysis	4.04	12.19	4.14	30.93
	Pabak Brand 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	30.00
67209	Analysis	5.88	7.42	4.00	28.96
67213	Analysis	5.88	7.86	4.22	29.82
67226	Analysis	5.83	8.06	2.75	29.35
	Pabak Brand 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67214	Analysis	6.13	10.43	7.00	37.37
67228	Analysis	6.01	10.36	7.47	37.60
	Pabak Brand 20% Superphosphate Guarantee		20.00		26.00
67216	Analysis		20.47		26.61
Swift & Company Fertilizer Works, Harvey and Shreveport, Louisiana, and Houston, Texas					
	Sulphate of Ammonia 20.50% Guarantee	20.50			49.20
66812	Analysis	20.67			49.61
	Swift's K.O. Non Acid-Forming 6-8-8 Guarantee	6.00	8.00	8.00	35.20
66907	Analysis	6.00	8.16	8.17	35.63
66920	Analysis	5.88	8.07	8.08	35.10
67052	Analysis	6.24	8.33	7.82	35.98
67118	Analysis	6.22	7.94	7.87	35.44
67175	Analysis	6.18	7.72	8.07	35.36
67319	Analysis	6.19	8.34	7.75	35.78
67376	Analysis	6.03	8.00	8.05	35.34
67385	Analysis	6.10	7.80	7.98	35.15
67410	Analysis	6.32	8.30	7.16	35.27
67817	Analysis	6.29	7.89	7.50	35.11
	Swift's pH 7 6-8-4 Guarantee	6.00	8.00	4.00	30.00
66811	Analysis	5.76	8.04	3.93	29.33
66817	Analysis	5.73	8.34	4.04	29.84
66820	Analysis	5.70	8.53	4.03	30.01
66825	Analysis	5.79	8.03	4.03	29.58
66833	Analysis	6.07	7.92	4.28	30.43
66838	Analysis	5.76	7.91	4.03	29.34
66851	Analysis	6.00	8.01	4.13	30.18
66916	Analysis	6.19	8.32	7.53	35.47
66926	Analysis	6.05	8.00	4.07	30.21
66955	Analysis	5.89	8.18	3.76	29.66
67066	Analysis	6.17	7.86	3.52	29.61
67091	Analysis	5.95	7.87	4.14	29.89
67117	Analysis	6.12	7.89	4.02	30.18
67303	Analysis	6.05	8.04	4.05	30.24
67310	Analysis	6.04	7.94	4.08	30.12
67327	Analysis	6.21	8.10	4.25	30.96
67364	Analysis	6.08	7.92	4.42	30.64
67377	Analysis	6.02	8.01	4.36	30.53
67408	Analysis	5.90	8.24	4.06	30.15
67420	Analysis	5.96	8.40	4.01	30.43
67433	Analysis	6.04	8.15	4.02	30.33
67486	Analysis	6.04	8.19	4.03	30.39
67535	Analysis	6.19	7.82	4.11	30.37

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Swift & Company Fertilizer Works, Harvey and Shreveport, Louisiana, and Houston, Texas—Continued					
67552	Analysis	6.23	8.22	4.17	31.06
67564	Analysis	6.15	7.81	4.08	30.21
67574	Analysis	6.01	8.02	4.10	30.18
67648	Analysis	6.08	8.32	4.09	30.73
67656	Analysis	6.06	8.13	4.08	30.41
67718	Analysis	6.15	8.19	4.14	30.79
67725	Analysis	5.94	8.09	4.11	30.12
67775	Analysis	6.04	8.36	4.02	30.60
67862	Analysis	6.00	7.92	3.71	29.52
Swift's Raw Bone Meal Fertilizer Guarantee		3.70	22.00*		28.68
67199	Analysis	4.07	22.47*		29.99
*Total phosphoric acid.					
Swift's Red Steer Brand 4-8-4 Guarantee		4.00	8.00	4.00	25.20
66919	Analysis	4.01	8.32	4.16	25.85
67029	Analysis	4.01	8.25	3.83	25.33
67048	Analysis	4.01	8.10	3.85	25.16
67090	Analysis	4.06	8.43	4.20	26.16
67119	Analysis	4.04	8.43	4.28	26.22
67130	Analysis	4.02	8.16	4.24	25.77
67157	Analysis	4.07	8.24	5.23	27.28
67276	Analysis	4.06	8.89	4.06	26.58
67297	Analysis	3.75	8.45	3.64	24.72
67365	Analysis	4.01	8.13	4.04	25.44
67391	Analysis	4.05	8.45	4.29	26.29
67407	Analysis	4.07	8.17	4.03	25.63
67432	Analysis	4.17	8.20	3.78	25.58
67454	Analysis	4.06	7.79	4.27	25.42
67484	Analysis	3.97	8.01	3.81	24.89
67521	Analysis	4.00	8.42	3.80	25.49
67533	Analysis	4.00	8.32	3.77	25.32
67556	Analysis	4.04	8.17	4.15	25.72
67561	Analysis	4.06	7.65	4.08	24.99
67580	Analysis	3.95	8.53	3.71	25.39
67618	Analysis	4.05	7.93	4.32	25.65
67635	Analysis	3.95	8.07	4.37	25.65
67646	Analysis	3.86	8.08	4.06	25.04
67655	Analysis	3.88	8.23	3.88	25.05
67710	Analysis	3.87	8.02	4.82	25.34
67717	Analysis	4.03	8.26	4.38	26.10
67724	Analysis	3.88	8.22	3.77	24.90
67743	Analysis	3.99	8.34	4.04	25.67
67762	Analysis	3.97	8.42	4.20	25.94
67773	Analysis	3.96	8.19	4.02	25.38
67799	Analysis	3.94	8.42	3.90	25.48
67833	Analysis	3.88	8.49	4.38	26.04
67849	Analysis	3.88	8.28	4.06	25.35
67871	Analysis	4.14	8.20	4.05	25.87
67911	Analysis	4.04	7.91	4.01	25.19
67950	Analysis	4.08	8.40	4.02	25.94
Swift's Red Steer Brand 4-8-6 Guarantee		4.00	8.00	6.00	27.80
67131	Analysis	3.94	8.20	5.95	27.86
67156	Analysis	3.89	8.08	6.14	27.82
67174	Analysis	4.02	8.15	6.06	28.13
67384	Analysis	4.08	8.30	5.66	27.94
67392	Analysis	4.03	7.55	5.99	27.28
67409	Analysis	3.93	8.29	6.09	28.13
67418	Analysis	3.99	7.83	6.54	28.26
67562	Analysis	4.06	8.26	5.65	27.83
67575	Analysis	4.39	8.46	5.03	28.08
67581	Analysis	3.81	8.03	5.34	26.52
67637	Analysis	3.92	8.21	5.63	27.40

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Swift & Company Fertilizer Works, Harvey and Shreveport, Louisiana, and Houston, Texas—Continued					
Swift's Red Steer Brand 4-8-6 Guarantee—Continued					
67744	Analysis	3.89	8.12	5.73	27.35
67774	Analysis	3.89	8.03	6.08	27.68
67800	Analysis	3.92	8.16	6.07	27.91
67818	Analysis	3.94	8.15	6.05	27.93
67834	Analysis	3.89	8.22	6.33	28.26
67938	Analysis	4.06	8.40	5.46	27.76
Swift's Red Steer Brand 4-10-0 Guarantee					
67030	Analysis	4.00	10.00		22.60
67053	Analysis	4.84	10.49		25.26
Swift's Red Steer Brand 4-12-4 Guarantee					
67173	Analysis	4.08	9.66		22.35
67242	Analysis	4.00	12.00	4.00	30.40
67273	Analysis	4.01	12.37	4.19	31.15
67277	Analysis	3.96	11.34	3.93	29.35
67295	Analysis	4.11	11.96	4.05	30.63
67302	Analysis	4.10	11.94	4.06	30.64
67311	Analysis	4.16	12.09	3.82	30.67
67314	Analysis	3.89	12.34	3.60	30.06
67326	Analysis	4.04	12.26	3.84	30.63
67363	Analysis	4.17	11.51	4.10	30.30
67389	Analysis	4.15	11.79	4.03	30.53
67419	Analysis	4.02	12.10	4.03	30.62
67431	Analysis	4.18	11.41	4.18	30.29
67456	Analysis	4.06	11.80	4.22	30.57
67463	Analysis	4.03	12.02	3.86	30.32
67534	Analysis	4.08	12.00	4.21	30.86
67557	Analysis	4.19	11.25	3.89	29.75
67563	Analysis	4.09	10.47	4.06	28.71
67579	Analysis	4.26	11.91	4.10	31.03
67638	Analysis	4.14	11.73	4.18	30.62
67776	Analysis	4.02	11.63	4.04	30.02
67850	Analysis	4.03	12.16	4.04	30.73
67856	Analysis	3.79	12.00	3.92	29.80
67863	Analysis	3.86	12.05	3.84	29.92
67872	Analysis	3.92	12.33	4.06	30.72
67883	Analysis	4.06	11.81	3.75	29.97
67949	Analysis	4.00	12.12	4.04	30.61
Swift's Red Steer Brand 5-15-5 Guarantee					
66832	Analysis	3.88	12.42	4.12	30.82
66912	Analysis	4.61	12.30	4.10	32.38
Swift's Red Steer Brand 6-10-7 Guarantee					
66804	Analysis	5.00	15.00	5.00	38.00
66908	Analysis	5.04	13.40	5.03	36.06
67026	Analysis	5.00	14.51	5.04	37.41
67049	Analysis	6.00	10.00	7.00	36.50
67050	Analysis	5.94	10.45	7.16	37.16
67316	Analysis	6.00	9.87	6.53	35.72
67328	Analysis	5.84	9.50	6.69	35.07
67421	Analysis	6.14	9.42	6.87	35.92
67430	Analysis	6.08	9.71	7.00	36.31
67464	Analysis	6.09	9.92	6.79	36.35
67551	Analysis	6.28	9.70	6.76	36.47
67636	Analysis	6.13	9.95	6.88	36.59
67647	Analysis	6.04	10.07	6.77	36.39
67711	Analysis	6.04	9.45	6.46	35.19
Swift's Red Steer Brand 6-12-6 Guarantee					
66813	Analysis	6.23	10.17	7.03	37.31
66826	Analysis	5.78	9.85	6.47	35.09
66831	Analysis	5.64	10.43	6.41	35.43
66906	Analysis	6.00	10.03	7.19	36.79
66917	Analysis	6.00	12.00	6.00	37.80
	Analysis	6.04	11.81	5.75	37.33
	Analysis	5.95	12.16	6.05	37.96
	Analysis	5.71	12.73	4.70	36.36
	Analysis	5.92	12.28	5.93	37.88
	Analysis	5.95	12.41	6.01	38.22

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Swift & Company Fertilizer Works, Harvey and Shreveport, Louisiana, and Houston, Texas—Continued					
Swift's Red Steer Brand 6-10-7 Guarantee—Continued					
66918	Analysis	6.10	12.13	6.01	38.22
66954	Analysis	5.69	11.96	5.89	36.87
67051	Analysis	6.02	12.43	6.06	38.49
67296	Analysis	6.13	12.13	5.58	37.73
67315	Analysis	5.96	11.14	6.04	36.63
67390	Analysis	6.07	11.82	6.06	37.82
67457	Analysis	5.80	12.07	6.03	37.45
67485	Analysis	6.03	11.75	5.91	37.43
67550	Analysis	6.10	12.18	6.18	38.50
Swift's Red Steer Brand Superphosphate 18% Guarantee			18.00		23.40
66819	Analysis		19.36		25.17
67260	Analysis		20.74		26.96
67422	Analysis		18.95		24.64
Swift's Red Steer Brand Superphosphate 20% Guarantee			20.00		26.00
66809	Analysis		20.47		26.61
66810	Analysis		20.83		27.08
66816	Analysis		20.60		26.78
66924	Analysis		20.14		26.18
67201	Analysis		20.30		26.39
67259	Analysis		20.59		26.77
67278	Analysis		19.62		25.51
67455	Analysis		18.99		24.69
Vigoro Guarantee		4.00	12.00	4.00	30.40
66802	Analysis	4.12	11.63	4.16	30.42
66828	Analysis	4.21	11.63	4.16	30.63
66884	Analysis	4.08	11.20	4.23	29.85
66925	Analysis	4.26	10.66	4.50	29.93
66943	Analysis	4.32	11.11	4.32	30.43
66952	Analysis	4.30	11.23	4.34	30.56
67200	Analysis	4.18	11.84	4.54	31.32
67429	Analysis	4.36	11.78	4.19	31.22
67809	Analysis	4.26	12.39	4.37	32.01
Temple Cotton Oil Company, North Little Rock, Arkansas					
Quapaw 4-8-4 Guarantee		4.00	8.00	4.00	25.20
67133	Analysis	4.15	8.15	3.39	24.97
Quapaw 4-8-6 Guarantee		4.00	8.00	6.00	27.80
67134	Analysis	3.91	7.79	6.54	28.01
Texas Farm Products Company, Nacogdoches, Texas					
Lone Star Brand 4-8-4 Fertilizer Guarantee		4.00	8.00	4.00	25.20
67003	Analysis	3.99	8.09	3.94	25.22
67044	Analysis	4.02	8.46	3.91	25.73
67230	Analysis	4.06	7.97	3.59	24.77
67281	Analysis	4.15	8.35	3.79	25.75
67475	Analysis	4.01	7.93	3.71	24.75
67477	Analysis	4.04	8.17	3.61	25.01
67527	Analysis	3.87	7.79	3.75	24.30
67558	Analysis	3.92	8.56	4.07	25.83
67584	Analysis	4.20	8.27	4.04	26.08
67607	Analysis	3.98	8.02	3.63	24.70
67684	Analysis	3.96	8.30	3.90	25.36
67713	Analysis	3.91	8.32	4.03	25.44
67795	Analysis	3.93	7.93	4.86	26.06
67802	Analysis	3.92	8.32	3.54	24.83
67876	Analysis	4.08	8.40	3.80	25.65
67896	Analysis	3.96	8.85	4.25	26.54
67907	Analysis	4.20	7.87	4.31	25.91
67924	Analysis	4.00	8.46	4.16	26.01
Lone Star Brand 4-8-6 Fertilizer Guarantee		4.00	8.00	6.00	27.80
66979	Analysis	4.08	8.36	5.88	28.30
67152	Analysis	4.03	8.02	5.78	27.61
67478	Analysis	4.02	8.08	6.08	28.05

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Texas Farm Products Company, Nacogdoches, Texas—Continued					
Lone Star Brand 4-12-4 Fertilizer Guarantee—Continued					
67525	Analysis	3.86	7.89	5.63	26.84
67598	Analysis	4.02	8.17	6.09	28.19
67605	Analysis	4.00	8.18	6.10	28.16
67640	Analysis	3.94	7.76	5.83	27.13
67714	Analysis	4.10	8.05	6.29	28.49
67801	Analysis	3.96	8.42	6.01	28.26
67908	Analysis	3.84	8.08	5.80	27.26
67965	Analysis	3.80	8.44	6.05	27.96
Lone Star Brand 4-10-0 Fertilizer Guarantee		4.00	10.00		22.60
67078	Analysis	4.02	10.23		22.95
Lone Star Brand 4-12-4 Fertilizer Guarantee		4.00	12.00	4.00	30.40
67004	Analysis	4.17	12.34	4.28	31.61
67231	Analysis	4.14	11.98	4.03	30.75
67234	Analysis	4.18	12.05	4.24	31.21
67250	Analysis	4.27	11.84	4.09	30.96
67268	Analysis	4.18	11.93	4.24	31.05
67232	Analysis	4.15	12.00	4.20	31.02
67318	Analysis	3.99	11.71	4.34	30.44
67334	Analysis	4.20	11.74	4.05	30.61
67474	Analysis	4.11	11.85	4.10	30.60
67526	Analysis	3.94	11.62	3.81	29.52
67559	Analysis	4.17	11.77	4.39	31.02
67568	Analysis	3.89	12.31	4.12	30.70
67599	Analysis	4.17	12.28	4.17	31.39
67606	Analysis	4.03	11.81	4.12	30.50
67641	Analysis	4.23	12.01	4.12	31.12
67685	Analysis	4.06	12.21	4.05	30.88
67830	Analysis	4.13	12.05	4.22	31.07
67845	Analysis	3.90	11.19	4.05	29.18
67877	Analysis	4.20	12.32	4.32	31.70
67894	Analysis	4.04	12.09	3.86	30.44
67897	Analysis	3.91	11.88	4.09	30.14
67906	Analysis	3.86	12.16	4.11	30.41
67925	Analysis	3.96	11.85	4.33	30.54
Lone Star Brand 6-8-4 Fertilizer Guarantee		6.00	8.00	4.00	30.00
67045	Analysis	5.90	9.13	3.85	31.04
Lone Star Brand 6-8-8 Fertilizer Guarantee		6.00	8.00	8.00	35.20
67001	Analysis	6.00	8.31	7.79	35.33
Lone Star Brand 6-9-3 Fertilizer Guarantee		6.00	9.00	3.00	30.00
67002	Analysis	5.96	9.65	3.00	30.75
67233	Analysis	6.04	9.09	3.48	30.84
67246	Analysis	6.08	9.20	3.12	30.61
67251	Analysis	6.11	9.04	3.13	30.48
67269	Analysis	6.06	9.00	3.02	30.17
67283	Analysis	5.98	9.15	3.00	30.15
67333	Analysis	6.08	9.15	3.04	30.44
67639	Analysis	5.94	8.91	3.10	29.87
Lone Star Brand 6-10-7 Fertilizer Guarantee		6.00	10.00	7.00	36.50
67005	Analysis	6.19	9.78	7.36	37.14
67043	Analysis	6.08	9.85	7.28	36.86
67232	Analysis	6.09	9.28	7.20	36.04
67317	Analysis	6.03	10.05	7.06	36.72
67380	Analysis	6.26	9.76	7.04	36.86
67476	Analysis	6.03	10.05	7.44	37.21
67479	Analysis	6.08	10.04	6.71	36.36
67569	Analysis	6.08	9.72	7.28	36.69
67895	Analysis	5.91	10.20	7.02	36.57
Lone Star Brand 6-12-6 Fertilizer Guarantee		6.00	12.00	6.00	37.80
67253	Analysis	6.17	12.39	6.04	38.77
Lone Star Brand 20% Superphosphate Guarantee			20.00		26.00
67006	Analysis		20.54		26.70
67247	Analysis		20.55		26.72

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand		Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Texas Farm Products Company, Nacogdoches, Texas—Continued						
67252	Analysis	.....		20.92		27.20
67570	Analysis	.....		20.42		26.55
67683	Analysis	.....		20.85		27.11
67803	Analysis	.....		21.61		28.09
Tri-State Fertilizer & Lumber Company, Shreveport, Louisiana						
	Red Diamond	4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67037	Analysis	.....	4.16	8.30	4.18	26.20
67609	Analysis	.....	4.34	8.02	4.50	26.70
	Red Diamond	4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67039	Analysis	.....	4.37	8.35	6.25	29.48
67382	Analysis	.....	4.24	7.50	8.37	30.81
	Red Diamond	4-8-10 Fertilizer Guarantee	4.00	8.00	10.00	33.00
67383	Analysis	.....	4.06	8.44	10.41	34.24
	Red Diamond	4-12-4 Fertilizer Guarantee	4.00	12.00	4.00	30.40
67610	Analysis	.....	4.48	11.72	4.58	31.94
	Red Diamond	6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67036	Analysis	.....	6.57	8.27	7.01	35.63
67038	Analysis	.....	6.62	7.99	7.21	35.65
67608	Analysis	.....	5.82	9.70	7.33	36.11
Tyler Fertilizer Company, Tyler, Texas						
	4-8-4 Heart Brand Fertilizer Guarantee	.....	4.00	8.00	4.00	25.20
67068	Analysis	.....	3.71	7.89	4.45	24.95
67624	Analysis	.....	3.82	8.06	3.97	24.81
67643	Analysis	.....	3.86	7.24	4.03	23.91
67734	Analysis	.....	4.12	8.37	4.23	26.27
67945	Analysis	.....	4.08	8.14	3.69	25.17
	4-8-6 Heart Brand Fertilizer Guarantee	.....	4.00	8.00	6.00	27.80
67064	Analysis	.....	3.76	8.51	5.89	27.74
67159	Analysis	.....	4.37	8.68	5.86	29.39
67625	Analysis	.....	4.16	7.82	5.98	27.92
67644	Analysis	.....	3.74	8.15	6.04	27.43
67735	Analysis	.....	4.06	9.10	6.14	29.55
67946	Analysis	.....	3.95	8.31	5.79	27.81
	4-12-4 Heart Brand Fertilizer Guarantee	.....	4.00	12.00	4.00	30.40
67623	Analysis	.....	4.35	11.81	4.13	31.16
	6-8-4 Heart Brand Fertilizer Guarantee	.....	6.00	8.00	4.00	30.00
67065	Analysis	.....	6.11	7.90	3.87	29.96
67645	Analysis	.....	5.92	8.38	4.18	30.53
	6-10-7 Heart Brand Fertilizer Guarantee	.....	6.00	10.00	7.00	36.50
67063	Analysis	.....	6.01	10.35	7.06	37.06
United Chemical Company, Dallas, Texas						
	King Cotton Fertilizer	4-8-4 Guarantee	4.00	8.00	4.00	25.20
67287	Analysis	.....	4.05	8.43	4.12	26.04
67612	Analysis	.....	4.07	9.47	4.12	27.44
67836	Analysis	.....	4.08	7.83	4.22	25.46
	Peanut Maker Fertilizer	4-12-4 Guarantee	4.00	12.00	4.00	30.40
67288	Analysis	.....	4.33	12.01	3.63	30.72
67709	Analysis	.....	4.00	13.02	4.10	31.86
	Sunset Brand Fertilizer	Truck & Fruit Special 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67158	Analysis	.....	3.94	7.43	5.94	26.84
67207	Analysis	.....	4.10	8.00	6.13	28.21
67611	Analysis	.....	3.96	8.78	5.46	28.01
	"Sunset Brand" Fertilizer	4-8-4 Guarantee	4.00	8.00	4.00	25.20
67040	Analysis	.....	4.05	8.20	4.11	25.72
67120	Analysis	.....	4.17	8.39	3.15	25.02
67184	Analysis	.....	4.13	8.08	3.68	25.19
67489	Analysis	.....	4.17	8.01	3.68	25.20
67543	Analysis	.....	4.15	8.24	3.58	25.32
67587	Analysis	.....	4.32	7.72	4.05	25.68
67669	Analysis	.....	3.91	8.95	3.63	25.74
67857	Analysis	.....	3.94	8.29	4.02	25.47
67951	Analysis	.....	3.92	7.62	4.06	24.60

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
United Chemical Company, Dallas, Texas—Continued					
	"Sunset Brand" Fertilizer 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67076	Analysis	4.09	7.09	6.14	27.02
67671	Analysis	3.95	7.93	5.73	27.30
67859	Analysis	4.15	7.68	6.02	27.77
	"Sunset Brand" Fertilizer 4-12-4 Guarantee	4.00	12.00	4.00	30.40
67206	Analysis	4.32	11.87	3.93	30.91
67241	Analysis	3.95	11.00	4.32	29.40
67320	Analysis	4.01	11.82	3.74	29.85
67490	Analysis	4.10	11.54	4.05	30.11
67588	Analysis	4.06	11.74	3.81	29.95
67670	Analysis	4.09	11.04	4.04	29.42
67837	Analysis	4.03	11.90	4.16	30.55
67858	Analysis	4.31	11.23	4.04	30.19
67868	Analysis	3.77	11.03	4.02	28.62
	"Sunset Brand" Fertilizer 6-9-3 Guarantee	6.00	9.00	3.00	30.00
67077	Analysis	6.00	8.84	3.51	30.45
	"Sunset Brand" Fertilizer 6-10-7 Guarantee	6.00	10.00	7.00	36.50
67075	Analysis	6.84	10.20	5.11	36.32
67185	Analysis	6.88	9.83	7.04	37.24
67190	Analysis	6.07	10.15	6.65	36.42
67672	Analysis	6.21	10.34	6.03	36.18
	"Sunset Brand" Fertilizer 6-12-6 Guarantee	6.00	12.00	6.00	37.80
67041	Analysis	5.88	12.57	4.86	36.77
67354	Analysis	5.79	12.88	5.04	37.19
	"Sunset Brand" Fertilizer 20.5% Sulphate of Ammonia Guarantee	20.50			49.20
67204	Analysis	20.50			49.20
	"Sunset Brand Fertilizer 20% Superphosphate Guarantee		20.00		26.00
67355	Analysis		20.87		27.13
	"United Plantfood" 4-8-4 Guarantee	4.00	8.00	4.00	25.20
67017	Analysis	4.00	7.99	4.02	25.22
67205	Analysis	4.23	8.28	3.96	26.06
67249	Analysis	4.21	8.06	4.28	26.14
67322	Analysis	4.18	8.42	4.08	26.28
67681	Analysis	4.07	7.50	4.09	24.84
67707	Analysis	3.86	8.40	4.01	25.39
67840	Analysis	3.83	8.65	3.99	25.63
	"United Plantfood" 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67103	Analysis	4.21	7.88	6.08	28.24
67121	Analysis	4.01	7.18	5.46	26.05
67682	Analysis	3.73	8.53	4.85	26.35
67708	Analysis	4.08	9.15	5.42	28.74
	"United Plantfood" 4-12-4 Guarantee	4.00	12.00	4.00	30.40
67016	Analysis	4.00	11.78	3.75	29.79
67245	Analysis	4.17	11.99	3.82	30.57
67248	Analysis	4.05	11.99	3.63	30.09
67323	Analysis	4.14	11.33	4.06	29.95
67542	Analysis	4.25	13.29	4.06	32.76
67560	Analysis	4.36	10.94	4.04	29.93
	"United Plantfood" 6-10-7 Guarantee	6.00	10.00	7.00	36.50
67042	Analysis	6.11	9.95	6.42	35.95
67208	Analysis	5.87	10.29	7.14	36.75
Virginia-Carolina Chemical Corporation, Shreveport, Louisiana					
	16% Nitrate of Soda Guarantee	16.00			38.40
67663	Analysis	16.01			38.42
	V.C. Blood, Bone & Potash Guarantee	4.00	8.00	4.00	25.20
67403	Analysis	4.08	8.53	4.28	26.44
	V.C. Fairway Fertilizer 6-8-4 Guarantee	6.00	8.00	4.00	30.00
67428	Analysis	6.36	8.07	4.49	31.59
	V.C. Fertilizer 0-12-4 Guarantee		12.00	4.00	20.80
67874	Analysis		12.18	3.96	20.98
	V.C. Fertilizer 0-20-0 Guarantee		20.00		26.00
67875	Analysis		22.00		28.60

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Virginia-Carolina Chemical Corporation, Shreveport, Louisiana					
—Continued					
	V.C. Fertilizer 4-8-4 Guarantee	4.00	8.00	4.00	25.20
67000	Analysis	4.36	9.10	4.17	27.71
67104	Analysis	4.09	8.32	4.09	25.96
67128	Analysis	4.00	8.43	3.93	25.66
67356	Analysis	4.38	8.80	4.16	27.36
67375	Analysis	4.11	8.27	4.33	26.24
67402	Analysis	4.02	8.37	4.28	26.09
67427	Analysis	4.26	8.63	4.27	26.99
67487	Analysis	4.10	9.28	4.34	27.54
67493	Analysis	4.04	8.28	3.83	25.44
67513	Analysis	3.99	8.43	4.12	25.90
67589	Analysis	3.97	8.13	4.06	25.38
67613	Analysis	3.91	8.04	4.17	25.25
67631	Analysis	3.94	8.30	4.04	25.50
67662	Analysis	4.00	8.36	4.02	25.70
67677	Analysis	3.94	8.49	3.67	25.27
67693	Analysis	3.99	8.35	3.76	25.33
67740	Analysis	4.09	8.51	4.22	26.37
67747	Analysis	4.12	8.42	4.03	26.08
67846	Analysis	4.10	8.46	4.01	26.05
67962	Analysis	3.98	8.87	4.21	26.55
	V.C. Fertilizer 4-8-6 Guarantee	4.00	8.00	6.00	27.80
67404	Analysis	4.06	8.32	6.32	28.78
67509	Analysis	4.03	8.47	6.35	28.91
67615	Analysis	4.08	8.55	6.28	29.07
67712	Analysis	4.02	8.67	6.25	29.05
67748	Analysis	3.89	8.86	5.83	28.44
67939	Analysis	4.03	8.51	6.07	28.62
67964	Analysis	4.03	8.68	6.04	28.92
	V.C. Fertilizer 4-8-10 Guarantee	4.00	8.00	10.00	33.00
67401	Analysis	4.03	8.06	10.48	33.37
67632	Analysis	3.94	8.69	10.54	34.46
67963	Analysis	3.89	8.36	9.66	32.78
	V.C. Fertilizer 4-12-4 Guarantee	4.00	12.00	4.00	30.40
66999	Analysis	4.20	12.59	4.30	32.04
67187	Analysis	4.06	12.35	4.38	31.49
67235	Analysis	4.20	12.31	4.33	31.71
67266	Analysis	4.13	12.11	4.26	31.19
67357	Analysis	4.14	12.26	4.02	31.11
67400	Analysis	4.12	12.46	4.06	31.37
67439	Analysis	4.16	12.25	4.13	31.28
67438	Analysis	4.15	12.24	4.07	31.16
67508	Analysis	4.17	12.25	4.30	31.53
67514	Analysis	4.16	12.57	4.06	31.60
67590	Analysis	4.09	12.63	4.07	31.53
67678	Analysis	4.15	12.17	4.02	31.01
67704	Analysis	4.13	12.22	4.03	31.03
67847	Analysis	3.95	12.82	3.89	31.21
67873	Analysis	4.19	12.34	4.05	31.37
	V.C. Fertilizer 6-8-4 Guarantee	6.00	8.00	4.00	30.00
67633	Analysis	6.06	8.05	4.18	30.44
67694	Analysis	6.01	8.23	4.08	30.42
67705	Analysis	6.04	8.31	4.03	30.54
	V.C. Fertilizer 6-8-8 Guarantee	6.00	8.00	8.00	35.20
67416	Analysis	5.63	8.59	7.76	34.78
	V.C. Fertilizer 6-9-3 Guarantee	6.00	9.00	3.00	30.00
67236	Analysis	5.95	9.39	3.26	30.73
67491	Analysis	5.85	9.46	3.02	30.27
67595	Analysis	6.00	9.35	3.01	30.47
	V.C. Fertilizer 6-10-7 Guarantee	6.00	10.00	7.00	36.50
66997	Analysis	5.98	10.33	7.21	37.80
67129	Analysis	5.90	10.43	7.10	36.95
67186	Analysis	5.80	10.59	7.33	37.22

Table 8. Analysis of commercial fertilizer, season 1941-42

Laboratory Number	Manufacturer, place of business and brand	Nitrogen per cent	Available phosphoric acid, per cent	Potash, per cent	Valuation found, per ton
Virginia-Carolina Chemical Corporation, Shreveport, Louisiana					
—Continued					
67284	Analysis	5.87	10.32	6.77	36.81
67417	Analysis	5.90	10.38	7.22	37.04
67516	Analysis	5.92	10.21	7.04	36.63
67614	Analysis	5.79	10.35	7.01	36.47
67634	Analysis	5.84	10.19	6.82	36.14
67679	Analysis	5.72	10.15	6.51	35.39
	V.C. Fertilizer 6-12-6 Guarantee	6.00	12.00	6.00	37.80
67105	Analysis	6.06	12.23	6.01	38.25
67398	Analysis	6.05	12.35	6.06	38.46
67517	Analysis	6.10	12.51	6.16	38.91
67591	Analysis	6.06	12.04	6.08	38.09
67616	Analysis	6.07	12.06	6.47	38.66
67703	Analysis	5.96	12.20	6.21	38.23
67940	Analysis	5.89	12.61	5.80	38.07
	V.C. Fruit & Truck Special Guarantee	6.00	10.00	7.00	36.50
67492	Analysis	5.58	10.85	7.07	36.69
	V.C. Potato Special Guarantee	4.00	8.00	10.00	33.00
66998	Analysis	4.08	8.53	10.17	34.10
67085	Analysis	4.04	8.43	9.83	33.44
67515	Analysis	4.15	8.09	10.03	33.52
	V.C. Truckers Special Guarantee	4.00	8.00	6.00	27.80
67415	Analysis	4.06	8.53	5.89	28.49
67494	Analysis	4.14	8.68	6.08	29.12
67824	Analysis	3.92	8.55	6.22	28.62
	V.C. 18% Superphosphate Guarantee		18.00		23.40
67848	Analysis		18.59		24.17
	V.C. 20% Superphosphate Guarantee		20.00		26.00
67267	Analysis		21.08		27.40
67399	Analysis		21.87		28.43
67706	Analysis		20.14		26.18
Waldo Fertilizer Works, Waldo, Arkansas					
	Victory 4-8-4 Fertilizer Guarantee	4.00	8.00	4.00	25.20
67087	Analysis	3.63	7.77	3.75	23.69
67657	Analysis	4.38	7.67	6.09	28.40
67667	Analysis	4.06	7.86	4.02	24.95
67756	Analysis	4.04	8.79	3.79	26.06
	Victory 4-8-6 Fertilizer Guarantee	4.00	8.00	6.00	27.80
67089	Analysis	4.92	9.14	6.18	31.72
	Victory 6-8-4 Fertilizer Guarantee	6.00	8.00	4.00	30.00
67731	Analysis	4.81	9.69	4.65	30.19
	Victory 6-8-8 Fertilizer Guarantee	6.00	8.00	8.00	35.20
67124	Analysis	6.02	8.37	7.83	35.51
	Victory 6-10-7 Fertilizer Guarantee	6.00	10.00	7.00	36.50
67088	Analysis	6.36	10.62	7.76	39.16
67125	Analysis	6.22	9.65	7.91	37.76
67658	Analysis	5.88	10.41	7.01	36.75
67668	Analysis	5.87	10.05	7.07	36.35
67730	Analysis	5.88	9.91	7.36	36.56
67755	Analysis	6.02	10.39	7.18	37.29
Water Culture Foundation, Dallas, Texas					
	Soil-Less Hydroponic Salts Guarantee	3.00	7.00	16.00	37.10
67805	Analysis	3.28	11.41	19.70	48.31